Schedule 1
Site Specific Expenses

SCHEDULE 1
PAGE 1 OF 1

NORTHERN UTILITIES, INC.- NEW HAMPSHIRE DIVISION
REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2021-2022 ENVIRONMENTAL RESPONSE COSTS
SITE SPECIFIC EXPENSES

Line	Description	Total	11/11 - 10/12	11/12 - 10/13	11/13 - 10/14	11/14-10/15	11/15-10/16	11/16-10/17	11/17-10/18	11/18-10/19	11/19-10/20	11/20-10/21	11/21-10/22	11/22-10/23	11/23-10/24	11/24-10/25	11/25-10/26	11/26-10/27	11/27-10/28	11/28-10/29
	ENVIRONMENTAL RESPONSE COST (ERC)																			
1	July 10 - June 11 Expenses Amortization (1/7)	$ 121,209	$ 17,316	$ 17,316	$ 17,316	$ 17,316	$ 17,316	$ 17,316	$ 17,316											
2	July 11 - June 12 Expenses Amortization (1/7)	$ 159,020		$ 22,717	$ 22,717	$ 22,717	$ 22,717	$ 22,717	$ 22,717	$ 22,717										
3	July 12 - June 13 Expenses Amortization (1/7)	$ 175,406			$ 25,058	$ 25,058	$ 25,058	$ 25,058	$ 25,058	$ 25,058	$ 25,058									
4	July 13 - June 14 Expenses Amortization (1/7)	$ 40,881				$ 5,840	$ 5,840	$ 5,840	$ 5,840	$ 5,840	$ 5,840	$ 5,840								
5	July 14 - June 15 Expenses Amortization (1/7)	$ 112,198					$ 16,028	$ 16,028	$ 16,028	$ 16,028	$ 16,028	$ 16,028	$ 16,028							
6	July 15 - June 16 Expenses Amortization (1/7)	$ 2,179,885						$ 311,412	$ 311,412	$ 311,412	$ 311,412	$ 311,412	$ 311,412	$ 311,412						
7	July 16 - June 17 Expenses Amortization (1/7)	$ 54,154							$7,736	$7,736	$7,736	$7,736	$7,736	$7,736	$7,736					
8	July 17 - June 18 Expenses Amortization (1/7)	$ 283,143								$40,449	$40,449	$40,449	$40,449	$40,449	$40,449	$40,449				
9	July 18 - June 19 Expenses Amortization (1/7)	$ 203,357									$ 29,051	$ 29,051	$ 29,051	$ 29,051	$ 29,051	$ 29,051	$ 29,051			
10	July 19 - June 20 Expenses Amortization (1/7)	$ 77,165										$ 11,024	$ 11,024	$ 11,024	$ 11,024	$ 11,024	$ 11,024	$ 11,024		
11	July 20 - June 21 Expenses Amortization (1/7)	$ 118,256											$ 16,894	$ 16,894	$ 16,894	$ 16,894	$ 16,894	$ 16,894	$ 16,894	
12	July 21 - June 22 Expenses Amortization (1/7)	$ 48,434												$ 6,919	$ 6,919	$ 6,919	$ 6,919	$ 6,919	$ 6,919	$ 6,919
13	Subtotal (Line 1 through Line 11)	$ 3,573,108	$ 17,316	$ 40,033	$ 65,091	$ 70,931	$ 86,959	$ 398,371	$ 406,108	$ 429,241	$ 435,575	$ 421,540	$ 432,594	$ 423,485	$ 112,073	$ 104,336	$ 63,887	$ 34,836	$ 23,813	$ 6,919
14	Add: Excess amortization from prior years (from schedule 5, Line 9)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Less: Excess amortization to be deferred (from schedule 5, Line 8)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
16	Total Environmental Response cost to be recovered (ERC)	$ 3,573,108	$ 17,316	$ 40,033	$ 65,091	$ 70,931	$ 86,959	$ 398,371	$ 406,108	$ 429,241	$ 435,575	$ 421,540	$ 432,594	$ 423,485	$ 112,073	$ 104,336	$ 63,887	$ 34,836	$ 23,813	$ 6,919
17	July 2010 - June 2011 Unamortized beginning balance		$ 121,209	$ 103,893	$ 86,578	$ 69,262	$ 51,947	$ 34,631	$ 17,316											
18	July 2011 - June 2012 Unamortized beginning balance			$ 159,020	$ 136,303	$ 113,586	$ 90,869	$ 68,151	$ 45,434	$ 22,717										
19	July 2012 - June 2013 Unamortized beginning balance				$ 175,406	$ 150,348	$ 125,290	$ 100,232	$ 75,174	$ 50,116	$ 25,058									
20	July 2013 - June 2014 Unamortized beginning balance					$ 40,881	$ 35,041	$ 29,201	$ 23,361	$ 17,521	$ 11,680	$ 5,840								
21	July 2014 - June 2015 Unamortized beginning balance						$ 112,198	$ 96,170	$ 80,141	$ 64,113	$ 48,085	$ 32,057	$ 16,028							
22	July 2015 - June 2016 Unamortized beginning balance							$ 2,179,885	$ 1,868,473	$ 1,557,061	$ 1,245,649	$ 934,236	$ 622,824	$ 311,412						
23	July 2016 - June 2017 Unamortized beginning balance								$ 54,154	$ 46,418	$ 38,681	$ 30,945	$ 23,209	$ 15,473	$ 7,736					
24	July 2017 - June 2018 Unamortized beginning balance									$ 283,143	$ 242,694	$ 202,245	$ 161,796	$ 121,347	$ 80,898	$ 40,449				
25	July 2018 - June 2019 Unamortized beginning balance										$ 203,357	$ 174,306	$ 145,255	$ 116,204	$ 87,153	$ 58,102	$ 29,051			
26	July 2019 - June 2020 Unamortized beginning balance											$ 77,165	$ 66,141	$ 55,118	$ 44,094	$ 33,071	$ 22,047	$ 11,024		
27	July 2020 - June 2021 Unamortized beginning balance												$ 118,256	$ 101,362	$ 84,468	$ 67,575	$ 50,681	$ 33,787	$ 16,894	
28	July 2021 - June 2022 Unamortized beginning balance													$ 48,434	$ 41,515	$ 34,596	$ 27,677	$ 20,757	$ 13,838	$ 6,919
29	Total Unamortized beginning balance		$ 121,209	$ 262,913	$ 398,287	$ 374,077	$ 415,344	$ 2,508,270	$ 2,164,053	$ 2,041,089	$ 1,815,204	$ 1,456,794	$ 1,153,509	$ 769,349	$ 345,865	$ 233,792	$ 129,456	$ 65,568	$ 30,732	$ 6,919
30	INSURANCE/3RD PARTY EXPENSES (IE) Expenses (from schedule 2)																			
31	INSURANCE/3RD PARTY RECOVERIES (IR)																			
32	UNDER/OVER Recovery from previous year																			
33	**Total of Lines 27 through 30**		$ 121,209	$ 262,913	$ 398,287	$ 374,077	$ 415,344	$ 2,508,270	$ 2,164,053	$ 2,041,089	$ 1,815,204	$ 1,456,794	$ 1,153,509	$ 769,349	$ 345,865	$ 233,792	$ 129,456	$ 65,568	$ 30,732	$ 6,919

Schedule 2
Cost Summary

Remediation Adjustment Clause Compliance Filing
2022 - 2023 Environmental Response Costs
Summary

LINE NO.	DESCRIPTION	LEGAL EXPENSE	CONSULTING EXPENSE	REMEDIATION EXPENSE	OTHER EXPENSE	100% RECOVERABLE EXPENSE	INSURANCE & 3RD PARTY EXPENSE	INSURANCE & THIRD PARTY RECOVERIES
1	Portsmouth Gas Works	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	Exeter Gas Works	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	Rochester Gas Works	$ -	$ -	$ 48,274.66	$ 159.39	$ 48,434.05	$ -	$ -
4	Dover Gas Works	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Somerworth Gas Works	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TOTALS	**$ -**	**$ -**	**$ 48,274.66**	**$ 159.39**	**$ 48,434.05**	**$ -**	**$ -**

Schedule 3

Invoice Lists

REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2022 - 2023 Environmental Response Costs
Site 11
Exeter Gas Works

LINE	VENDOR NAME	INVOICE NO.	LEGAL EXPENSE	CONSULTING EXPENSE	REMEDIATION EXPENSE	OTHER EXPENSE	TOTAL
	None						$ -
							$ -
							$ -
TOTAL			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2022 - 2023 Environmental Response Costs
Site 13
Rochester Gas Works

LINE	VENDOR NAME	INVOICE NO.	LEGAL EXPENSE	CONSULTING EXPENSE	REMEDIATION EXPENSE	OTHER EXPENSE	TOTAL
1	AECOM	2000514190	$ -	$ -	$ 9,538.14	$ -	$ 9,538.14
2	AECOM	2000521235			$ 2,573.21	$ -	$ 2,573.21
3	AECOM	2000523418			$ 1,305.00	$ -	$ 1,305.00
4	AECOM	2000525319			$ 1,360.00	$ -	$ 1,360.00
5	AECOM	2000535749			$ 2,115.06	$ -	$ 2,115.06
6	AECOM	2000536962			$ 5,324.38	$ -	$ 5,324.38
7	AECOM	2000549490			$ 2,190.00	$ -	$ 2,190.00
8	AECOM	2000559945			$ 9,035.96	$ -	$ 9,035.96
9	AECOM	2000567400			$ 3,706.26	$ -	$ 3,706.26
10	AECOM	2000580518			$ 2,129.51	$ -	$ 2,129.51
11	AECOM	2000588365			$ 1,789.12	$ -	$ 1,789.12
12	AECOM	2000604281			$ 2,707.00	$ -	$ 2,707.00
13	AECOM	2000626357			$ 1,746.11	$ -	$ 1,746.11
14	AECOM	2000633989			$ 2,754.91	$ -	$ 2,754.91
15	CITY OF ROCHESTER	14100490			$ -	$ 64.41	$ 64.41
16	CITY OF ROCHESTER	101640			$ -	$ 34.98	$ 34.98
17	CITY OF ROCHESTER	14113717			$ -	$ 30.00	$ 30.00
18	CITY OF ROCHESTER	14121655			$ -	$ 30.00	$ 30.00
19	**TOTAL**		**$ -**	**$ -**	**$ 48,274.66**	**$ 159.39**	**$ 48,434.05**

REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2022 - 2023 Environmental Response Costs
Site 14
Somersworth Gas Works

LINE	VENDOR NAME	INVOICE NO.	LEGAL EXPENSE	CONSULTING EXPENSE	REMEDIATION EXPENSE	OTHER EXPENSE	TOTAL
1	NONE		$ -	$ -	$ -	$ -	$ -
2			$ -	$ -	$ -	$ -	$ -
3	**TOTAL**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2022 - 2023 Environmental Response Costs
Dover Gas Works
Cocheco and Portland Streets, Dover, NH

Schedule 3D

LINE	VENDOR NAME	INVOICE NO.	LEGAL EXPENSE	CONSULTING EXPENSE	REMEDIATION EXPENSE	OTHER EXPENSE	TOTAL
1	**None**						$ -
2							$ -
3							$ -
	TOTAL		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2022 - 2023 Environmental Response Costs
Portsmouth Gas Works

LINE	VENDOR NAME	INVOICE NO.	LEGAL EXPENSE	CONSULTING EXPENSE	REMEDIATION EXPENSE	OTHER EXPENSE	TOTAL
1	**None**						$ -
2							$ -
3							$ -
TOTAL			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Schedule 4 Site Narratives

See Separate Files

Attachment 3B

Rochester Invoices

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: 07-JUL-21
Invoice Number: 2000514190

Agreement Description: TAR 01/12/21

Payment Term: 30 DAYS

Please reference Invoice Number and Project Number with Remittance

Project Number : 60139732
Bill Through Date : 01-MAY-21 - 02-JUL-21

Project Name : 13046002 Rochester GWP

Task Number : 2100

Task Name : M. McCabe-Field Rate Environ

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
McCabe, Mark M	P20	07-MAY-21	2.50	215.00	537.50
McCabe, Mark M	P20	14-MAY-21	2.00	215.00	430.00
McCabe, Mark M	P20	11-JUN-21	3.00	215.00	645.00
McCabe, Mark M	P20	25-JUN-21	2.00	215.00	430.00
Total Labor Bill Rate			**9.50**		**2,042.50**

Task Total : M. McCabe-Field Rate **2,042.50**

Task Number : 2600

Task Name : 2020 Field Invest ERC

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	07-MAY-21	4.00	115.00	460.00
Callahan, Colin P	P13	28-MAY-21	1.00	115.00	115.00
Callahan, Colin P	P13	11-JUN-21	4.00	115.00	460.00
Callahan, Colin P	P13	18-JUN-21	4.00	115.00	460.00
Callahan, Colin P	P13	25-JUN-21	2.00	115.00	230.00
Callahan, Colin P	P13	02-JUL-21	4.00	115.00	460.00
Howe, Charles S	P16	14-MAY-21	0.50	135.00	67.50
Howe, Charles S	P16	04-JUN-21	7.50	135.00	1,012.50
Howe, Charles S	P16	11-JUN-21	6.00	135.00	810.00
McCarthy, Ryan S	P16	07-MAY-21	2.00	170.00	340.00
McCarthy, Ryan S	P16	14-MAY-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	28-MAY-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	04-JUN-21	1.00	170.00	170.00
McCarthy, Ryan S	P16	11-JUN-21	1.50	170.00	255.00
McCarthy, Ryan S	P16	18-JUN-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	25-JUN-21	0.50	170.00	85.00
White, Taylor Patrick (Taylor)	P10	21-MAY-21	2.00	83.00	166.00
Total Labor Bill Rate			**41.50**		**5,346.00**

SubConsultant

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	13-MAY-21	RCLS2101225	708.00	1.0800	764.64
Total SubConsultant				**708.00**		**764.64**

Task Total : 2020 Field Invest **6,110.64**

Task Number : 2700 **Task Name : 2020 Report** ERC

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	07-MAY-21	4.00	115.00	460.00
Callahan, Colin P	P13	14-MAY-21	2.00	115.00	230.00
Cleary, Maryanne V	P14	07-MAY-21	1.50	115.00	172.50
Total Labor Bill Rate			**7.50**		**862.50**

Task Total : 2020 Report **862.50**

Task Number : 2800 **Task Name : HASP** ERC

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Hunt, Audrey Clarke	P11	14-MAY-21	1.50	92.50	138.75
Hunt, Audrey Clarke	P11	04-JUN-21	0.50	92.50	46.25
Wray, Dale W (Pete)	P15	04-JUN-21	1.00	125.00	125.00
Total Labor Bill Rate			**3.00**		**310.00**

Task Total : HASP **310.00**

Task Number : 2900 **Task Name : Field Samp Analysis** ERC

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	21-MAY-21	2.00	115.00	230.00
Howe, Charles S	P16	07-MAY-21	15.00	135.00	2,025.00
Total Labor Bill Rate			**17.00**		**2,255.00**

Task Total : Field Samp Analysis **2,255.00**

Task Number : 3100 **Task Name : Util Con ovrsite/Rpt** Environ

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Howe, Charles S	P16	07-MAY-21	0.50	135.00	67.50
Hunt, Audrey Clarke	P11	14-MAY-21	2.50	92.50	231.25
Total Labor Bill Rate			**3.00**		**298.75**

SubConsultant

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	13-MAY-21	RCLS2101225	-708.00	1.0800	-764.64
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	13-MAY-21	S2101225	708.00	1.0800	764.64
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	18-MAY-21	S2101309	708.00	1.0800	764.64
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	18-MAY-21	S2101311	-708.00	1.0800	-764.64
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	18-MAY-21	S2101312	991.20	1.0800	1,070.50
Total SubConsultant				**991.20**		**1,070.50**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Lunch	Howe, Charles S	06-MAY-21	EXP7815182	18.37	1.0800	19.84
Lunch	Howe, Charles S	06-MAY-21	EXP7838782	18.37	1.0800	19.84
Materials	Howe, Charles S	05-MAY-21	EXP7838782	21.24	1.0800	22.94
Materials	Howe, Charles S	06-MAY-21	EXP7838782	2.10	1.0800	2.27
Mileage	Howe, Charles S	05-MAY-21	EXP7815182	34.16	1.0800	36.89
Mileage	Howe, Charles S	06-MAY-21	EXP7815182	72.24	1.0800	78.02
Travel All Other	Howe, Charles S	05-MAY-21	EXP7815182	2.46	1.0000	2.46
Travel All Other	Howe, Charles S	06-MAY-21	EXP7815182	4.39	1.0000	4.39
Total Reimbursable				**173.33**		**186.65**

Task Total : Util Con ovrsite/Rpt **1,555.90**

Project Total : 13046002 Rochester GWP	**13,136.54**

Invoice Summaries	
Total Current Amount :	13,136.54
Retention Amount :	0.00
Pre-Tax Amount :	13,136.54
Tax Amount :	0.00
Total Invoice Amount :	**13,136.54**

Billing Summaries

Billing Summary	**Current**	**Prior**	**Total**	**Limit**	**Remain**
Billings	13,136.54	542,848.99	555,985.53	587,033.69	31,048.16
Tax	0.00	0.00	0.00		
Billing Total :	13,136.54	542,848.99	555,985.53		

PO 76538

30.40.22.00.932.01.00	$ 3,598.40
30.40.00.00.182.29.00	$ 9,538.14
	$ 13,136.54

AECOM

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

RECEIVED
JUL 20, 2021
By

July 7, 2021

Our Reference
AECOM Ref. No: 60139732-Inv. 84

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities related to Groundwater Permit GWP-198712002-R-006
Petrolane/Northern Utilities, Inc. Site (DES #198712002, Project #432)
AECOM Project # 60139732
Period Ending June 18, 2021

Dear Mr. Murphy:

Enclosed for your information is the invoice and Progress Report for professional environmental consulting services related to groundwater monitoring as specified in the groundwater permit (GWP) for the site (GWP-198712002-R-006) issued by the New Hampshire Department of Environmental Services (NHDES).

Project Budget Information

This invoice is for $13,136.54. The total authorized budget for 2020/21 is $279,360. The proposals for 2020/21 GWP activities included the following: performing one round of groundwater monitoring each year as specified in the GWP for the site and preparing an annual groundwater monitoring report consistent with those that have been submitted in the past (Comprehensive Groundwater Quality Summary Reports are to be submitted every two years [January 2022]). AECOM has prepared a work plan for a source investigation in response to a meeting with Unitil, AECOM, and Amy Doherty at NHDES on February 5, 2020, as well as a waste management plan in response to a Unitil request to consult on environmental issues related to the upgrade of utility infrastructure at the Site. Add-ons to the original proposal included tasks for on-call consulting, scope of work/work plan development, the field investigation, pipeline construction support/consulting, associated reporting for the above referenced investigation, health and safety plan updates, waste profile field sampling and analysis, supplemental field sampling and analysis, and utility construction oversight and reporting. **As is detailed below, Tasks 2600, 2900, and 3100 are billed as redundancies for convenience and will cease upon depletion.**

This project was proposed on a time and materials basis to be billed on a monthly basis.

Task 2100 2021 Strategic On-Call Consulting

This task has been established for Mr. Mark McCabe to support the project in a strategic senior consulting capacity, and during this reporting period captures agency follow-up related to the source investigation and development of the site investigation report. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $2,042.50.

Task 2600 2021 Field Investigation

During this invoicing period AECOM provided oversight support to the HDD installation. This included visits to the site and delivery of analytical laboratory samples. Other costs included are related to laboratory analytical services. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $6,110.64.

Task 2700 2021 Report

During this invoicing period AECOM submitted the Site Investigation report. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $862.50.

Task 2800 2021 Health And Safety Plan Updates

During this invoicing period AECOM completed the annual Health and Safety Plan updates. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $310.00.

Task 2900 2021 Field Sampling Analysis

During this invoicing period AECOM provided oversight support to the HDD installation. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $2,255.00.

Task 3100 2021 Utility Construction Oversight/Reporting

During this invoicing period AECOM provided oversight support to the HDD installation. This included visits to the site and delivery of analytical laboratory samples. Other costs included are related to travel and laboratory analytical services. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $1,555.90.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional services in the future.

Sincerely yours,
AECOM

Ryan McCarthy
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Assistant Project Manager
AECOM
E: colin.callahan@aecom.com

Attachment

Table 1 Invoice Summary
Rochester Groundwater Permit GWP-198712002-R-006 Activities
May/ June 2021 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
2100	On-Call Consulting	$44,500.00	$42,367.90	$2,042.50	$44,410.40	$89.60
2200	2020 NHDES Modeling Response	$28,560.00	$26,737.75	$0.00	$26,737.75	$1,822.25
2300	November 2020 Groundwater Monitoring Event	$13,900.00	$12,405.15	$0.00	$12,405.15	$1,494.85
2400	November 2020 Reporting Event	$5,800.00	$5,636.25	$0.00	$5,636.25	$163.75
2500	Work Plan Preparation	$16,700.00	$16,633.75	$0.00	$16,633.75	$66.25
2600	Field Investigation	$82,900.00	$68,182.19	$6,110.64	$74,292.83	$8,607.17
2700	Reporting	$30,200.00	$28,596.25	$862.50	$29,458.75	$741.25
2800	HASP Updates	$2,100.00	$1,757.50	$310.00	$2,067.50	$32.50
2900	Field Sampling and Analysis	$13,800.00	$10,213.10	$2,255.00	$12,468.10	$1,331.90
3100	Utility Construction Oversight and Reporting	$16,800.00	$14,978.86	$1,555.90	$16,534.76	$265.24
3200	November 2021 Groundwater Monitoring Event	$14,000.00	$0.00	$0.00	$0.00	$14,000.00
3300	November 2021 Reporting Event	$10,100.00	$0.00	$0.00	$0.00	$10,100.00
Total		**$279,360.00**	**$227,508.70**	**$13,136.54**	**$240,645.24**	**$30,814.20**

2020 GWP $19,700
2020 Site Investigation/ Utility Upgrade $154,100
2020 Supplemental Investigation - $44,000
2021 GWP $33,000

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: **27-JUL-21**
Invoice Number: **2000521235**

Agreement Number: **EM13046004**
Agreement Description: Conversion - 177741

Payment Term: **30 DAYS**
Agreement Description: TAR 01/12/21
Please reference Invoice Number and Project Number with Remittance

Project Number : **60139734**
Bill Through Date : 29-MAY-21 - 16-JUL-21
Project Name : **UNITIL PHYTOREMEDIATION PROGRAM**

Task Number : 1400
Task Name : 2021 Phyto

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	11-JUN-21	1.00	125.00	125.00
Callahan, Colin P	P13	18-JUN-21	1.00	125.00	125.00
Callahan, Colin P	P13	25-JUN-21	2.00	125.00	250.00
Callahan, Colin P	P13	02-JUL-21	1.00	125.00	125.00
Callahan, Colin P	P13	16-JUL-21	2.00	125.00	250.00
Howe, Charles S	P16	25-JUN-21	0.50	135.00	67.50
Hunt, Audrey Clarke	P07	25-JUN-21	8.00	55.00	440.00
McCarthy, Ryan S	P16	18-JUN-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	09-JUL-21	0.50	170.00	85.00
McKenna, James Walter (Walter)	P08	25-JUN-21	6.75	65.00	438.75
Total Labor Bill Rate			**23.25**		**1,991.25**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Materials	Cleary, Maryanne V	18-MAY-21	EXP7851490	358.00	1.0800	386.64
Materials	Hunt, Audrey Clarke	22-JUN-21	EXP7896074	15.65	1.0800	16.90
Mileage	Hunt, Audrey Clarke	22-JUN-21	RCLEXP7844041	81.20	1.0800	87.70
Mileage	McKenna, James Walter (Walter)	22-JUN-21	RCLEXP7871841	84.00	1.0800	90.72
Total Reimbursable				**538.85**		**581.96**

Task Total : **2021 Phyto** **2,573.21**

Project Total : **UNITIL PHYTOREMEDIATION PROGRAM** **2,573.21**

Invoice Summaries

Total Current Amount :	2,573.21
Retention Amount :	0.00
Pre-Tax Amount :	2,573.21
Tax Amount :	0.00
Total Invoice Amount :	**2,573.21**

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	2,573.21	339,349.19	341,922.40	371,078.59	29,156.19
Tax	0.00	0.00	0.00		
Billing Total :	2,573.21	339,349.19	341,922.40		

PO 76538 30.40.00.00.182.29.00

AECOM imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

RECEIVED
AUG 16 2021
By

July 27, 2021

AECOM Reference
60139734-Inv. 109

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2021 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending July 16, 2021

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2021 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $2,573.21. The total authorized budget for this project for the 2021 calendar year is $22,000. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2021 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1400 2021 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to a Site inspection, the plumber activating the backflow preventer, and a full irrigation event. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $2,573.21.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

Table 1 Invoice Summary
2021 Phytoremediation Program
June 2021 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1400	Continued Groundwater Suppression Installation Activities 2021	$ 22,000.00	$ 5,728.91	$ 2,573.21	$ 8,302.12	$ 13,452.08
Total		**$22,000.00**	**$5,728.91**	**$2,573.21**	**$8,302.12**	**$13,452.08**

2021 Phyto Funding $22,000

Check Payment to:
AECOM Technical Services, Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Technical Services, Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Technical Services, Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 95-2661922

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: 03-AUG-21
Invoice Number: 2000523418

Agreement Number: 60536962-2
Agreement Description:

Payment Term: 60 DAYS

Please reference Invoice Number and Project Number with Remittance

Project Number : 60536962
Bill Through Date : 19-SEP-20 - 30-JUL-21
Project Name : 2017 Consulting Support

Rochester

Task Number : 300 **Task Name : Field Support**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	16-JUL-21	2.00	105.00	210.00
Callahan, Colin P	P13	23-JUL-21	3.00	105.00	315.00
Callahan, Colin P	P13	30-JUL-21	2.00	105.00	210.00
Total Labor Bill Rate			**7.00**		**735.00**

Task Total : Field Support **735.00**

Task Number : 980 **Task Name : Field Rate**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
McCabe, Mark M	P20	09-JUL-21	1.00	190.00	190.00
McCabe, Mark M	P20	16-JUL-21	1.00	190.00	190.00
McCabe, Mark M	P20	23-JUL-21	1.00	190.00	190.00
Total Labor Bill Rate			**3.00**		**570.00**

Task Total : Field Rate **570.00**

Project Total : 2017 Consulting Support **1,305.00**

Invoice Summaries

Total Current Amount :	1,305.00
Retention Amount :	0.00
Pre-Tax Amount :	1,305.00
Tax Amount :	0.00
Total Invoice Amount :	**1,305.00**

OK

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	1,305.00	167,725.02	169,030.02	169,171.43	141.41
Tax	0.00	0.00	0.00		
Billing Total :	1,305.00	167,725.02	169,030.02		

PO 76538 30.40.00.00.182.29 00

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

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Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: 06-AUG-21
Invoice Number: 2000525319

Agreement Description: TAR 01/12/21

Payment Term: 30 DAYS

Please reference Invoice Number and Project Number with Remittance

---

Project Number : **60139732**
Bill Through Date : 03-JUL-21 - 30-JUL-21
Project Name : 13046002 Rochester GWP

Agreement Description: 1/16/17 TAR

Task Number : 2100
Task Name : M. McCabe-Field Rate

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
McCabe, Mark M	P20	09-JUL-21	5.00	215.00	1,075.00
Total Labor Bill Rate			**5.00**		**1,075.00**

Task Total : M. McCabe-Field Rate **1,075.00**

Task Number : 2600
Task Name : 2020 Field Invest

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	09-JUL-21	2.00	115.00	230.00
Callahan, Colin P	P13	16-JUL-21	1.00	115.00	115.00
Callahan, Colin P	P13	23-JUL-21	1.00	115.00	115.00
Callahan, Colin P	P13	30-JUL-21	1.00	115.00	115.00
Howe, Charles S	P16	09-JUL-21	2.00	135.00	270.00
Howe, Charles S	P16	16-JUL-21	1.00	135.00	135.00
McCarthy, Ryan S	P16	09-JUL-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	16-JUL-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	30-JUL-21	0.50	170.00	85.00
Total Labor Bill Rate			**9.50**		**1,235.00**

Task Total : 2020 Field Invest **1,235.00**

Task Number : 2700
Task Name : 2020 Report

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Barry, Kevin P	P15	09-JUL-21	1.00	125.00	125.00
Total Labor Bill Rate			**1.00**		**125.00**

Task Total : 2020 Report **125.00**

Project Total : 13046002 Rochester GWP **2,435.00**

Invoice Summaries
Total Current Amount : 2,435.00

Invoice Summaries

Retention Amount :	0.00
Pre-Tax Amount :	2,435.00
Tax Amount :	0.00
Total Invoice Amount :	**2,435.00**

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	2,435.00	555,985.53	558,420.53	587,033.69	28,613.16
Tax	0.00	0.00	0.00		
Billing Total :	2,435.00	555,985.53	558,420.53		

AECOM

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

August 4, 2021

Our Reference
AECOM Ref. No: 60139732-Inv. 85

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities related to Groundwater Permit GWP-198712002-R-006
Petrolane/Northern Utilities, Inc. Site (DES #198712002, Project #432)
AECOM Project # 60139732
Period Ending July 30, 2021

Dear Mr. Murphy:

Enclosed for your information is the invoice and Progress Report for professional environmental consulting services related to groundwater monitoring as specified in the groundwater permit (GWP) for the site (GWP-198712002-R-006) issued by the New Hampshire Department of Environmental Services (NHDES).

Project Budget Information

This invoice is for $2,435.00. The total authorized budget for 2020/21 is $279,360. The proposals for 2020/21 GWP activities included the following: performing one round of groundwater monitoring each year as specified in the GWP for the site and preparing an annual groundwater monitoring report consistent with those that have been submitted in the past (Comprehensive Groundwater Quality Summary Reports are to be submitted every two years [January 2022]). AECOM has prepared a work plan for a source investigation in response to a meeting with Unitil, AECOM, and Amy Doherty at NHDES on February 5, 2020, as well as a waste management plan in response to a Unitil request to consult on environmental issues related to the upgrade of utility infrastructure at the Site. Add-ons to the original proposal included tasks for on-call consulting, scope of work/work plan development, the field investigation, pipeline construction support/consulting, associated reporting for the above referenced investigation, health and safety plan updates, waste profile field sampling and analysis, supplemental field sampling and analysis, and utility construction oversight and reporting.

This project was proposed on a time and materials basis to be billed on a monthly basis.

Task 2100 2021 Strategic On-Call Consulting

This task has been established for Mr. Mark McCabe to support the project in a strategic senior consulting capacity, and during this reporting period captures agency follow-up related to the source investigation and development of the site investigation report. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $1,075.00. Although this task is slightly exceeded, the project as a whole is on budget.

Task 2600 2021 Field Investigation

During this invoicing period AECOM provided oversight support to the HDD installation. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $1,235.00.

Task 2700 2021 Report

During this invoicing period AECOM performed follow-up activities for the previously submitted Site Investigation report. As detailed in Table 1 and the attached invoice, costs incurred during this invoicing period associated with this task were $125.00.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional services in the future.

Sincerely yours,
AECOM

Ryan McCarthy
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Assistant Project Manager
AECOM
E: colin.callahan@aecom.com

Attachment

Table 1 Invoice Summary
Rochester Groundwater Permit GWP-198712002-R-006 Activities
July 2021 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
2100	On-Call Consulting	$44,500.00	$44,410.00	$1,075.00	$45,485.00	-$985.00
2200	2020 NHDES Modeling Response	$28,560.00	$26,737.75	$0.00	$26,737.75	$1,822.25
2300	November 2020 Groundwater Monitoring Event	$13,900.00	$12,405.15	$0.00	$12,405.15	$1,494.85
2400	November 2020 Reporting Event	$5,800.00	$5,636.25	$0.00	$5,636.25	$163.75
2500	Work Plan Preparation	$16,700.00	$16,633.75	$0.00	$16,633.75	$66.25
2600	Field Investigation	$82,900.00	$74,292.83	$1,235.00	$75,527.83	$7,372.17
2700	Reporting	$30,200.00	$29,458.75	$125.00	$29,583.75	$616.25
2800	HASP Updates	$2,100.00	$2,067.50	$0.00	$2,067.50	$32.50
2900	Field Sampling and Analysis	$13,800.00	$12,468.10	$0.00	$12,468.10	$1,331.90
3100	Utility Construction Oversight and Reporting	$16,800.00	$16,534.76	$0.00	$16,534.76	$265.24
3200	November 2021 Groundwater Monitoring Event	$14,000.00	$0.00	$0.00	$0.00	$14,000.00
3300	November 2021 Reporting Event	$10,100.00	$0.00	$0.00	$0.00	$10,100.00
Total		**$279,360.00**	**$240,644.84**	**$2,435.00**	**$243,079.84**	**$28,379.60**

2020 GWP $19,700
2020 Site Investigation/ Utility Upgrade $154,100
2020 Supplemental Investigation - $44,000
2021 GWP $33,000

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

RECEIVED
SEP 17, 2021
By

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: **03-SEP-21**
Invoice Number: **2000535749**

Agreement Number: **EM13046004**
Agreement Description: Conversion - 177741

Payment Term: **30 DAYS**
Agreement Description: TAR 01/12/21
Please reference Invoice Number and Project Number with Remittance

Project Number **: 60139734**
Bill Through Date : 17-JUL-21 - 27-AUG-21

Project Name **: UNITIL PHYTOREMEDIATION PROGRAM**

Task Number : 1400

Task Name : 2021 Phyto

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	23-JUL-21	1.00	125.00	125.00
Callahan, Colin P	P13	30-JUL-21	1.00	125.00	125.00
Callahan, Colin P	P13	13-AUG-21	1.00	125.00	125.00
Callahan, Colin P	P13	20-AUG-21	2.00	125.00	250.00
Howe, Charles S	P16	30-JUL-21	1.00	135.00	135.00
Hunt, Audrey Clarke	P07	30-JUL-21	8.00	55.00	440.00
McCarthy, Ryan S	P16	30-JUL-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	20-AUG-21	0.50	170.00	85.00
McKenna, James Walter (Walter)	P08	30-JUL-21	8.00	65.00	520.00
Total Labor Bill Rate			**23.00**		**1,890.00**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Field Supplies	Hunt, Audrey Clarke	28-JUL-21	EXP7926604	40.39	1.0800	43.62
Mileage	Hunt, Audrey Clarke	28-JUL-21	EXP7882453	84.00	1.0800	90.72
Mileage	McKenna, James Walter (Walter)	28-JUL-21	EXP7919147	84.00	1.0800	90.72
Total Reimbursable				**208.39**		**225.06**

Task Total **: 2021 Phyto** **2,115.06**

Project Total : UNITIL PHYTOREMEDIATION PROGRAM **2,115.06**

Invoice Summaries

Total Current Amount :	2,115.06
Retention Amount :	0.00
Pre-Tax Amount :	2,115.06
Tax Amount :	0.00
Total Invoice Amount :	**2,115.06**

OK

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	2,115.06	341,922.40	344,037.46	360,078.59	16,041.13
Tax	0.00	0.00	0.00		
Billing Total :	2,115.06	341,922.40	344,037.46		

PO 76538 30.40.00.00.182.29.00

AECOM Imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

September 03, 2021

AECOM Reference
60139734-Inv. 110

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2021 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending August 27, 2021

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2021 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $2,115.06. The total authorized budget for this project for the 2021 calendar year is $22,000. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2021 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1400 2021 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to Site inspections in July and August. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $2,115.06.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

Table 1 Invoice Summary
2021 Phytoremediation Program
July-August 2021 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1400	Continued Groundwater Suppression Installation Activities 2021	$ 22,000.00	$ 8,302.12	$ 2,115.06	$ 10,417.18	$ 11,337.02
Total		**$22,000.00**	**$8,302.12**	**$2,115.06**	**$10,417.18**	**$11,337.02**

2021 Phyto Funding $22,000

Check Payment to:
AECOM Technical Services, Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Technical Services, Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Technical Services, Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 95-2661922

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: 12-NOV-21
Invoice Number: 2000559945

Agreement Number: 60536962-2
Agreement Description:

2021

Payment Term: 60 DAYS

Please reference Invoice Number and Project Number with Remittance

Project Number : 60536962
Bill Through Date : 25-SEP-21 - 29-OCT-21
Project Name : 2017 Consulting Support

Task Number : 300 **Task Name : Field Support**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Mileage	Callahan, Colin P	08-SEP-21	EXP7999326	56.00	1.0500	58.80
Mileage	Callahan, Colin P	13-SEP-21	EXP7999326	56.00	1.0500	58.80
Mileage	Callahan, Colin P	15-SEP-21	EXP7999326	56.00	1.0500	58.80
Total Reimbursable				**168.00**		**176.40**

Task Total : Field Support **176.40**

Task Number : 410 **Task Name : Field Sampling**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
McCabe, Mark M	P20	01-OCT-21	4.00	215.00	860.00
Total Labor Bill Rate			**4.00**		**860.00**

SubConsultant

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Professional Services	GEOSEARCH INC	15-SEP-21	21PV9483	5,274.00	1.0800	5,695.92
Professional Services	TPI ENVIRONMENTAL INC	27-SEP-21	10015	1,400.00	1.0800	1,512.00
Professional Services	EUROFINS SPECTRUM ANALYTICAL INC	30-SEP-21	6200001159	580.00	1.0800	626.40
Total SubConsultant				**7,254.00**		**7,834.32**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Outside Contractors	PALMS ENVIRONMENTAL LLC	21-SEP-21	38519	153.00	1.0800	165.24
Total Reimbursable				**153.00**		**165.24**

Task Total : Field Sampling **8,859.56**

Project Total : 2017 Consulting Support **9,035.96**

Invoice Summaries

Total Current Amount :	9,035.96
Retention Amount :	0.00
Pre-Tax Amount :	9,035.96

Invoice Summaries

Tax Amount :	0.00
Total Invoice Amount :	**9,035.96**

Ok

Billing Summaries

Billing Summary	**Current**	**Prior**	**Total**	**Limit**	**Remain**
Billings	9,035.96	176,203.15	185,239.11	185,299.43	60.32
Tax	0.00	0.00	0.00		
Billing Total :	9,035.96	176,203.15	185,239.11		

Outstanding Invoices

Invoice Number	**Invoice Date**	**Invoice Balance**
2000547574	01-OCT-21	5,324.38
2000559945	12-NOV-21	9,035.96
Outstanding Total :		14,360.34

PO 76538 30. 40.00.00.182.79.00

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: 03-DEC-21
Invoice Number: 2000567400

Agreement Description: TAR 01/12/21

Payment Term: 30 DAYS

RECEIVED
DEC 16 2021
Accounts Payable

Please reference Invoice Number and Project Number with Remittance

Project Number : 60139734
Bill Through Date : 02-OCT-21 - 26-NOV-21

Project Name : UNITIL PHYTOREMEDIATION PROGRAM

Task Number : 1400

Task Name : 2021 Phyto

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	08-OCT-21	1.00	125.00	125.00
Callahan, Colin P	P13	15-OCT-21	1.00	125.00	125.00
Callahan, Colin P	P13	22-OCT-21	2.00	125.00	250.00
Callahan, Colin P	P13	29-OCT-21	2.00	125.00	250.00
Callahan, Colin P	P13	05-NOV-21	5.00	125.00	625.00
Callahan, Colin P	P13	12-NOV-21	2.00	125.00	250.00
Callahan, Colin P	P13	19-NOV-21	2.00	125.00	250.00
Callahan, Colin P	P13	26-NOV-21	2.00	125.00	250.00
Howe, Charles S	P16	26-NOV-21	3.50	135.00	472.50
Hunt, Audrey Clarke	P07	26-NOV-21	10.50	55.00	577.50
McCarthy, Ryan S	P16	08-OCT-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	05-NOV-21	1.00	170.00	170.00
McCarthy, Ryan S	P16	12-NOV-21	0.50	170.00	85.00
McCarthy, Ryan S	P16	26-NOV-21	0.50	170.00	85.00
Total Labor Bill Rate			**33.50**		**3,600.00**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Mileage	Hunt, Audrey Clarke	30-SEP-21	EXP8042256	78.40	1.0800	84.67
Miscellaneous - Allowable	Hunt, Audrey Clarke	30-SEP-21	EXP8042286	19.99	1.0800	21.59
Total Reimbursable				**98.39**		**106.26**

Task Total : **2021 Phyto** 3,706.26

Project Total : **UNITIL PHYTOREMEDIATION PROGRAM** 3,706.26

Invoice Summaries

Total Current Amount :	3,706.26
Retention Amount :	0.00
Pre-Tax Amount :	3,706.26
Tax Amount :	0.00
Total Invoice Amount :	**3,706.26**

PO 76538 30.40.00.00.182.29.00

ok

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	3,706.26	346,227.46	349,933.72	360,078.59	10,144.87
Tax	0.00	0.00	0.00		

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billing Total :	3,706.26	346,227.46	349,933.72		

Outstanding Invoices

Invoice Number	Invoice Date	Invoice Balance
2000567400	03-DEC-21	3,706.26
2000549490	15-OCT-21	2,190.00
Outstanding Total :		5,896.26

AECOM Imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

December 1, 2021

AECOM Reference
60139734-Inv. 112

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2021 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending November 26, 2021

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2021 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $3,706.26. The total authorized budget for this project for the 2021 calendar year is $22,000. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2021 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1400 2021 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to an irrigation event and Site inspection in November. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $3,706.26.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

Table 1 Invoice Summary
2021 Phytoremediation Program
October-November 2021 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1400	Continued Groundwater Suppression Installation Activities 2021	$ 22,000.00	$ 12,607.18	$ 3,706.26	$ 16,313.44	$ 5,440.76
Total		**$22,000.00**	**$12,607.18**	**$3,706.26**	**$16,313.44**	**$5,440.76**

2021 Phyto Funding $22,000

RECEIVED
JAN 31 2022
Accounts Payable

ABA Number 071000039

Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-906-2100
Fax:978-906-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

RECEIVED JAN 18 2022

Invoice Date: 10-JAN-22
Invoice Number: 2000580518

Agreement Number: EM13046004
Agreement Description: Conversion - 177741

Payment Term: 30 DAYS
Agreement Description: TAR 01/12/21
Please reference Invoice Number and Project Number with Remittance

Project Number : 60139734 **Project Name : UNITIL PHYTOREMEDIATION PROGRAM**
Bill Through Date : 27-NOV-21 - 24-DEC-21

Task Number : 1400 **Task Name : 2021 Phyto**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	03-DEC-21	2.00	125.00	250.00
Callahan, Colin P	P13	10-DEC-21	2.00	125.00	250.00
Callahan, Colin P	P13	17-DEC-21	2.00	125.00	250.00
Callahan, Colin P	P13	24-DEC-21	1.00	125.00	125.00
Howe, Charles S	P16	10-DEC-21	8.00	135.00	1,080.00
McCarthy, Ryan S	P16	24-DEC-21	0.50	170.00	85.00
Total Labor Bill Rate			**15.50**		**2,040.00**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Mileage	Hunt, Audrey Clarke	23-NOV-21	EXP8122840	82.88	1.0800	89.51
Total Reimbursable				**82.88**		**89.51**

Task Total : 2021 Phyto **2,129.51**

Project Total : UNITIL PHYTOREMEDIATION PROGRAM **2,129.51**

Invoice Summaries

Total Current Amount :	2,129.51
Retention Amount :	0.00
Pre-Tax Amount :	2,129.51
Tax Amount :	0.00
Total Invoice Amount :	**2,129.51**

PO 78165 2040.00.00.187.29.00

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	2,129.51	349,933.72	352,063.23	360,078.59	8,015.36
Tax	0.00	0.00	0.00		
Billing Total :	2,129.51	349,933.72	352,063.23		

1/31/22 email Peter

January 3, 2022

AECOM Reference
60139734-Inv. 113

RECEIVED JAN 18 [illegible]

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2021 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending December 24, 2021

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2021 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $2,129.51. The total authorized budget for this project for the 2021 calendar year is $22,000. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2021 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1400 [illegible] Groundwater [illegible] Evaluation Activities

During this invoicing period, costs incurred were related to a Site inspection and cleanup performed in December. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $2,129.51.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

ecember 2021 Billing Period

	Task	Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remainin Budget
1400	Continued Groundwater Suppression Installation Activities 2021	$ 22,000.00	$ 16,313.44	$ 2,129.51	$ 18,442.95	$ 3,311.
Total		**$22,000.00**	**$16,313.44**	**$2,129.51**	**$18,442.95**	**$3,311**

021 Phyto Funding $22,000

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

RECEIVED

FEB 17 2022

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

Accounts Payable
ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

RECEIVED FEB 18 2022

Invoice Date: 03-FEB-22
Invoice Number: 2000588365

Agreement Number:
Agreement Description: TAR 01/12/21

Payment Term: 30 DAYS

Please reference Invoice Number and Project Number with Remittance

Project Number : 60139734
Bill Through Date : 25-DEC-21 - 28-JAN-22

Project Name : UNITIL PHYTOREMEDIATION PROGRAM

Task Number : 1400

Task Name : 2021 Phyto

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	31-DEC-21	2.00	125.00	250.00
Callahan, Colin P	P13	14-JAN-22	4.00	125.00	500.00
Callahan, Colin P	P13	21-JAN-22	4.00	125.00	500.00
Callahan, Colin P	P13	28-JAN-22	2.00	125.00	250.00
McCarthy, Ryan S	P16	21-JAN-22	0.50	170.00	85.00
Total Labor Bill Rate			**12.50**		**1,585.00**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Repairs & Maintenance	Cleary, Maryanne V	06-DEC-21	EXP8155985	189.00	1.0800	204.12
Total Reimbursable				**189.00**		**204.12**

Task Total : 2021 Phyto 1,789.12

Project Total : UNITIL PHYTOREMEDIATION PROGRAM 1,789.12

Invoice Summaries

Total Current Amount :	1,789.12
Retention Amount :	0.00
Pre-Tax Amount :	1,789.12
Tax Amount :	0.00
Total Invoice Amount :	1,789.12

PO 78165 30.40.00.00.182.29.00

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	1,789.12	352,063.23	353,852.35	382,678.59	28,826.24
Tax	0.00	0.00	0.00		
Billing Total :	1,789.12	352,063.23	353,852.35		

Outstanding Invoices

Invoice Number	Invoice Date	Invoice Balance
2000580518 — PAID	10-JAN-22	2,129.51
2000588365	03-FEB-22	1,789.12
Outstanding Total :		3,918.63

AECOM Expense Report EXP8155985

AECOM

Employee Name	Cleary, Maryanne V
Expense Date Range	06-DEC-21 - 06-DEC-21
Cost Center	5803
Approver	McCarthy, Ryan S
Report Submit Date	19-JAN-2022
Report Currency	USD
Project	60139734
Task	1400
Draft Number	114

ACM
Signature

☑ I certify the claimed business expenses contained herein are bona fide and proper business expenses incurred on behalf of AECOM, and is in accordance with AECOM travel & expense policies.

Supplier Expenses

Date	Expense Type	Receipt Amount	Receipt Currency	Reimbursable Amount	Merchant	Justification	Expenditure Organization
06-DEC-2021	Repairs & Maintenance	189.00	USD	189.00	A-D ARCHAMBAULT PLUMBING	winterizing	41.ACM.US_ME.7965
			Total:	189.00			

Cleary, Maryanne

From: ClearentGateway@clearent.com
Sent: Monday, December 6, 2021 11:28 AM
To: Cleary, Maryanne
Subject: [EXTERNAL] Your receipt from A-D Archambault Plumbing & Heating Inc

Here is your receipt from A-D Archambault Plumbing & Heating Inc.

A-D Archambault Plumbing & Heating Inc

603-335-1800

Terminal: A-D Archambault Plumbing & Heating Inc
Transaction ID: 196932636
Transaction Date: 12/06/2021 04:28 PM (UTC)
Transaction Type: SALE, APPROVED
Card Number: **** **** **** 6902
Card Type: VISA
AUTH: 006099
Entry Mode: Manual Entry
MID: ********5954
TID: 55275823

Invoice: 2023
Order ID: 196932636
Comments: 60139734.1400

Amount: 189.00 USD
Total: 189.00 USD

AECOM Imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

February 2, 2022

AECOM Reference
60139734-Inv. 114

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2021 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending January 28, 2021

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2021 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $1,789.12. The total authorized budget for this project for the 2021 calendar year is $22,000. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2021 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1400 2021 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to subcontracted backflow preventor winterizing and generation of the Phytoremediation Memo included as an attachment to the Annual Report. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $1,789.12.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

Table 1 Invoice Summary
2021 Phytoremediation Program
Dec 2021/ Jan 2022 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1400	Continued Groundwater Suppression Installation Activities 2021	$ 22,000.00	$ 18,447.95	$ 1,789.12	$ 20,237.07	$ 1,517.13
Total		**$22,000.00**	**$18,447.95**	**$1,789.12**	**$20,237.07**	**$1,517.13**

2021 Phyto Funding $22,000

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

AECOM

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: 18-MAR-22
Invoice Number: 2000604281

Agreement Number:
Agreement Description: TAR 01/12/21

Payment Term: 30 DAYS

Please reference Invoice Number and Project Number with Remittance

Project Number : 60139734
Bill Through Date : 29-JAN-22 - 14-MAR-22

Project Name : UNITIL PHYTOREMEDIATION PROGRAM

Task Number : 1400 **Task Name : 2021 Phyto**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	04-FEB-22	2.00	125.00	250.00
Callahan, Colin P	P13	11-FEB-22	3.00	125.00	375.00
McCarthy, Ryan S	P16	04-FEB-22	0.50	170.00	85.00
Total Labor Bill Rate			5.50		710.00

Task Total : 2021 Phyto 710.00

Task Number : 1500 **Task Name : 2022 GW Supp Install**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	11-FEB-22	1.00	125.00	125.00
Callahan, Colin P	P13	18-FEB-22	2.00	125.00	250.00
Callahan, Colin P	P13	25-FEB-22	2.00	125.00	250.00
Callahan, Colin P	P13	04-MAR-22	2.00	125.00	250.00
Howe, Charles S	P16	25-FEB-22	3.50	135.00	472.50
McCarthy, Ryan S	P16	25-FEB-22	0.50	170.00	85.00
McCarthy, Ryan S	P16	11-MAR-22	1.00	170.00	170.00
Meyler, Mary E (Mary)	P15	25-FEB-22	0.50	125.00	62.50
White, Taylor Patrick (Taylor)	Junior Technician	25-FEB-22	4.00	83.00	332.00
Total Labor Bill Rate			16.50		1,997.00

Task Total : 2022 GW Supp Install 1,997.00

Project Total : UNITIL PHYTOREMEDIATION PROGRAM 2,707.00

Invoice Summaries

Total Current Amount :	2,707.00
Retention Amount :	0.00
Pre-Tax Amount :	2,707.00
Tax Amount :	0.00
Total Invoice Amount :	2,707.00

PO 78165 30.40.00.00.182.29.00

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	2,707.00	353,852.35	356,559.35	382,678.59	26,119.24

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Tax	0.00	0.00	0.00		
Billing Total :	2,707.00	353,852.35	356,559.35		

Outstanding Invoices

Invoice Number	Invoice Date	Invoice Balance
2000588365	03-FEB-22	1,789.12
Outstanding Total :		1,789.12

Table 1 Invoice Summary
2022 Phytoremediation Program
February 2022 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1400	Continued Groundwater Suppression Installation Activities 2021	$ 22,000.00	$ 20,237.07	$ 710.00	$ 20,947.07	$ 807.13
1500	Continued Groundwater Suppression Installation Activities 2022	$ 22,600.00	$ -	$ 1,997.00	$ 1,997.00	$ 20,603.00
Total		**$44,600.00**	**$20,237.07**	**$2,707.00**	**$22,944.07**	**$21,410.13**

2021 Phyto Funding $22,000
2022 Phyto Funding $22,600

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	29-JAN-22 - 04-FEB-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	Callahan, Colin P
Employee Number	:	647972
Draft Number	:	115

Project	Task	Type	SAT 29-JAN	SUN 30-JAN	MON 31-JAN	TUE 01-FEB	WED 02-FEB	THUR 03-FEB	FRI 04-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1400 2021 Phyto	Regular Hrs	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
		Total :	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00

Callahan, Colin P

Employee Signature

Approver For Employee Signature

Tammi, Carl E

Approver Signature

Total Regular Hours:	2.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 05-FEB-22 - 11-FEB-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Callahan, Colin P
Employee Number : 647972
Draft Number : 115

Project	Task	Type	SAT 05-FEB	SUN 06-FEB	MON 07-FEB	TUE 08-FEB	WED 09-FEB	THUR 10-FEB	FRI 11-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1400 2021 Phyto	Regular Hrs	0.00	0.00	0.00	0.00	4.00	0.00	0.00	4.00
		Total :	0.00	0.00	0.00	0.00	4.00	0.00	0.00	4.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Sison, Jenny Lyn (Jenny)
Approver Signature

Total Regular Hours: 4.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	12-FEB-22 - 18-FEB-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	Callahan, Colin P
Employee Number	:	647972
Draft Number	:	115

Project	Task	Type	SAT 12-FEB	SUN 13-FEB	MON 14-FEB	TUE 15-FEB	WED 16-FEB	THUR 17-FEB	FRI 18-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1400 2021 Phyto	Regular Hrs	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00
		Total :	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours:	2.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	29-JAN-22 - 04-FEB-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	McCarthy, Ryan S
Employee Number	:	648137
Draft Number	:	115

Project	Task	Type	SAT 29-JAN	SUN 30-JAN	MON 31-JAN	TUE 01-FEB	WED 02-FEB	THUR 03-FEB	FRI 04-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1400 2021 Phyto	Regular Hrs	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50
		Total :	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours:	0.50
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 19-FEB-22 - 25-FEB-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Callahan, Colin P
Employee Number : 647972
Draft Number : 115

Project	Task	Type	SAT 19-FEB	SUN 20-FEB	MON 21-FEB	TUE 22-FEB	WED 23-FEB	THUR 24-FEB	FRI 25-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
		Total :	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Stiller, Michael
Approver Signature

Total Regular Hours: 2.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	26-FEB-22 - 04-MAR-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	Callahan, Colin P
Employee Number	:	647972
Draft Number	:	115

Project	Task	Type	SAT 26-FEB	SUN 27-FEB	MON 28-FEB	TUE 01-MAR	WED 02-MAR	THUR 03-MAR	FRI 04-MAR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	1.00	0.00	1.00	0.00	2.00
		Total :	0.00	0.00	0.00	1.00	0.00	1.00	0.00	2.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Stiller, Michael
Approver Signature

Total Regular Hours:	2.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 19-FEB-22 - 25-FEB-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Howe, Charles S
Employee Number : 647557
Draft Number : 115

Project	Task	Type		SAT 19-FEB	SUN 20-FEB	MON 21-FEB	TUE 22-FEB	WED 23-FEB	THUR 24-FEB	FRI 25-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	0.00	0.00	3.50	0.00	3.50
			Total :	0.00	0.00	0.00	0.00	0.00	3.50	0.00	3.50

Howe, Charles S

Employee Signature

Approver For Employee Signature

McCarthy, Ryan S

Approver Signature

Total Regular Hours:	3.50
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	19-FEB-22 - 25-FEB-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	McCarthy, Ryan S
Employee Number	:	648137
Draft Number	:	115

Project	Task	Type	SAT 19-FEB	SUN 20-FEB	MON 21-FEB	TUE 22-FEB	WED 23-FEB	THUR 24-FEB	FRI 25-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.50
		Total :	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.50

McCarthy, Ryan S

Employee Signature

Approver For Employee Signature

Tammi, Carl E

Approver Signature

Total Regular Hours:	0.50
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 05-MAR-22 - 11-MAR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : McCarthy, Ryan S
Employee Number : 648137
Draft Number : 115

Project	Task	Type		SAT 05-MAR	SUN 06-MAR	MON 07-MAR	TUE 08-MAR	WED 09-MAR	THUR 10-MAR	FRI 11-MAR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	0.00	0.50	0.00	0.50	1.00
			Total :	0.00	0.00	0.00	0.00	0.50	0.00	0.50	1.00

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours: 1.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	19-FEB-22 - 25-FEB-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	White, Taylor Patrick (Taylor)
Employee Number	:	721088
Draft Number	:	115

Project	Task	Type	SAT 19-FEB	SUN 20-FEB	MON 21-FEB	TUE 22-FEB	WED 23-FEB	THUR 24-FEB	FRI 25-FEB	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.00	0.00	4.00	0.00	4.00
		Total :	0.00	0.00	0.00	0.00	0.00	4.00	0.00	4.00

White, Taylor Patrick (Taylor)

Employee Signature

Approver For Employee Signature

McCarthy, Ryan S

Approver Signature

Total Regular Hours:	4.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

March 18, 2022

AECOM Reference
60139734-Inv. 115

RECEIVED MAR 22 2022

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2022 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending March 14, 2022

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2022 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $2,707.00. The total authorized budget for this project for the 2021 Calendar year is $22,000 and for the 2022 calendar year is $22,600. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2022 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1400 2021 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to the Phytoremediation Memo included as an attachment to the Annual Report. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $710.00.

Task 1500 2022 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to a bi-monthly Site inspection. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $1,997.00.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

Check Payment to:
AECOM Inc.
An AECOM Company
1178 Paysphere Circle
Chicago, IL 60674

ACH Payment to:
AECOM Inc.
An AECOM Company
Bank of America
Account Number 5800937020
ABA Number 071000039

Wire Transfer Payment to:
AECOM Inc.
An AECOM Company
Bank of America
New York, NY 10001
Account Number 5800937020
ABA Number 026009593
SWIFT CODE BOFAUS3N

Received 05/24/2022
Environmental - T. Murphy

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: **20-MAY-22**
Invoice Number: **2000626357**

Agreement Number: **EM13046004**
Agreement Description: Conversion - 177741

Payment Term: **30 DAYS**
Agreement Description: TAR 01/12/21
Please reference Invoice Number and Project Number with Remittance

Project Number : **60139734**
Bill Through Date : 15-MAR-22 - 29-APR-22
Project Name : **UNITIL PHYTOREMEDIATION PROGRAM**

Task Number : 1500 **Task Name : 2022 GW Supp Install**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	25-MAR-22	1.00	125.00	125.00
Callahan, Colin P	P13	22-APR-22	1.00	125.00	125.00
Callahan, Colin P	P13	29-APR-22	2.00	125.00	250.00
Hunt, Audrey Clarke	P07	29-APR-22	8.00	55.00	440.00
McCarthy, Ryan S	P16	01-APR-22	1.00	170.00	170.00
McCarthy, Ryan S	P16	15-APR-22	1.00	170.00	170.00
McKenna, James Walter (Walter)	P08	29-APR-22	7.00	65.00	455.00
Total Labor Bill Rate			**21.00**		**1,735.00**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Materials	Howe, Charles S	24-FEB-22	EXP8219098	10.58	1.0500	11.11
Total Reimbursable				**10.58**		**11.11**

Task Total : 2022 GW Supp Install **1,746.11**

Project Total : UNITIL PHYTOREMEDIATION PROGRAM **1,746.11**

Invoice Summaries

Total Current Amount :	1,746.11
Retention Amount :	0.00
Pre-Tax Amount :	1,746.11
Tax Amount :	0.00
Total Invoice Amount :	**1,746.11**

OK to Pay

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	1,746.11	356,559.35	358,305.46	382,678.59	24,373.13
Tax	0.00	0.00	0.00		
Billing Total :	1,746.11	356,559.35	358,305.46		

PO 78165 30.40.00.00.182.29.00

Table 1 Invoice Summary
2022 Phytoremediation Program
March-April 2022 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1500	Continued Groundwater Suppression Installation Activities 2022	$ 22,600.00	$ 1,997.00	$ 1,746.11	$ 3,743.11	$ 18,856.89
Total		**$22,600.00**	**$1,997.00**	**$1,746.11**	**$3,743.11**	**$18,856.89**

2022 Phyto Funding $22,600

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 19-MAR-22 - 25-MAR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Callahan, Colin P
Employee Number : 647972
Draft Number : 116

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		19-MAR	20-MAR	21-MAR	22-MAR	23-MAR	24-MAR	25-MAR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
			Total :	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours: 1.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 16-APR-22 - 22-APR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Callahan, Colin P
Employee Number : 647972
Draft Number : 116

			SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type	16-APR	17-APR	18-APR	19-APR	20-APR	21-APR	22-APR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
		Total :	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Stiller, Michael
Approver Signature

Total Regular Hours: 1.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 23-APR-22 - 29-APR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Callahan, Colin P
Employee Number : 647972
Draft Number : 116

			SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type	23-APR	24-APR	25-APR	26-APR	27-APR	28-APR	29-APR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
		Total :	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours: 2.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 23-APR-22 - 29-APR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : Hunt, Audrey Clarke
Employee Number : 708866
Draft Number : 116

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		23-APR	24-APR	25-APR	26-APR	27-APR	28-APR	29-APR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	8.00	0.00	0.00	0.00	8.00
			Total :	0.00	0.00	0.00	8.00	0.00	0.00	0.00	8.00

Hunt, Audrey Clarke
Employee Signature

Approver For Employee Signature

Keough Jr, Thomas J
Approver Signature

Total Regular Hours:	8.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 26-MAR-22 - 01-APR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : McCarthy, Ryan S
Employee Number : 648137
Draft Number : 116

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		26-MAR	27-MAR	28-MAR	29-MAR	30-MAR	31-MAR	01-APR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	0.00	0.50	0.00	0.50	1.00
			Total :	0.00	0.00	0.00	0.00	0.50	0.00	0.50	1.00

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours: 1.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	09-APR-22 - 15-APR-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	McCarthy, Ryan S
Employee Number	:	648137
Draft Number	:	116

			SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type	09-APR	10-APR	11-APR	12-APR	13-APR	14-APR	15-APR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
		Total :	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours:	1.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 23-APR-22 - 29-APR-22
Organization : 41.ACM.US_ME.7965
Assignment Category : V - PT Variable
Employee Category : Non Exempt
Employee Name : McKenna, James Walter (Walter)
Employee Number : 721461
Draft Number : 116

Project	Task	Type		SAT 23-APR	SUN 24-APR	MON 25-APR	TUE 26-APR	WED 27-APR	THUR 28-APR	FRI 29-APR	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	7.00	0.00	0.00	0.00	7.00
			Total :	0.00	0.00	0.00	7.00	0.00	0.00	0.00	7.00

McKenna, James Walter (Walter)
Employee Signature

Approver For Employee Signature

Ramos, Maria Theresa Sabusab (Terry)
Approver Signature

Total Regular Hours:	7.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

May 20, 2022

AECOM Reference
60139734-Inv. 116

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2022 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending April 29, 2022

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2022 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $1746.11. The total authorized budget for this project for the 2022 calendar year is $22,600. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2022 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1500 2022 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to an initial Site inspection, oversight of the backflow preventer activation, and spring watering set-up. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $1,746.11.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Colin Callahan
Environmental Scientist
AECOM
E: colin.callahan@aecom.com

Check Payment to:	ACH Payment to:	Wire Transfer Payment to:
AECOM Inc.	AECOM Inc.	AECOM Inc.
An AECOM Company	An AECOM Company	An AECOM Company
1178 Paysphere Circle	Bank of America	Bank of America
Chicago, IL 60674	Account Number 5800937020	New York, NY 10001
	ABA Number 071000039	Account Number 5800937020
		ABA Number 026009593
		SWIFT CODE BOFAUS3N

AECOM

PO 78165

250 Apollo Drive, Chelmsford, MA 01824
Tel: 978-905-2100
Fax:978-905-2101

Federal Tax ID No. 06-0852759

RECEIVED

JUN 13 2022

Accounts Payable

RECEIVED 06/13/2022
Environemntal - T. Murphy

ATTN : MURPHY THOMAS
UNITIL SERVICES CORPORATON
6 LIBERTY LANE W
HAMPTON, NH 03842
United States

Invoice Date: **10-JUN-22**
Invoice Number: **2000633989**
Agreement Number: **EM13046004**
Agreement Description: **TAR 01/12/21**
Payment Term: **30 DAYS**

Please reference Invoice Number and Project Number with Remittance

Project Number : **60139734**
Bill Through Date : 30-APR-22 - 27-MAY-22
Project Name : **UNITIL PHYTOREMEDIATION PROGRAM**

Task Number : 1500 **Task Name : 2022 GW Supp Install**

Labor Bill Rate

Employee Name/Title	Title/Expenditure	Date	Hours	Bill Rate	Billed Amt
Callahan, Colin P	P13	20-MAY-22	1.00	125.00	125.00
Callahan, Colin P	P13	27-MAY-22	6.00	125.00	750.00
Chan, Nicholas (Nick)	Junior Field Technician	27-MAY-22	5.00	66.95	334.75
McCarthy, Ryan S	P16	06-MAY-22	0.50	170.00	85.00
McCarthy, Ryan S	P16	13-MAY-22	1.00	170.00	170.00
McCarthy, Ryan S	P16	20-MAY-22	0.50	170.00	85.00
McCarthy, Ryan S	P16	27-MAY-22	4.00	170.00	680.00
Total Labor Bill Rate			**18.00**		**2,229.75**

Reimbursable

Expenditure Type	Employee/Vendor Name	Date	Inv Number	Raw Cost	Multiplier	Billed Amt
Lunch	Hunt, Audrey Clarke	26-APR-22	EXP8301337	33.08	1.0800	35.73
Lunch	McCarthy, Ryan S	23-MAY-22	EXP8340330	50.62	1.0800	54.67
Materials	Callahan, Colin P	26-MAY-22	EXP8339629	5.00	1.0500	5.25
Mileage	Hunt, Audrey Clarke	26-APR-22	EXP8301337	99.45	1.0800	107.41
Mileage	McKenna, James Walter (Walter)	26-APR-22	EXP8291442	87.75	1.0800	94.77
Mileage	McCarthy, Ryan S	23-MAY-22	EXP8340330	49.14	1.0800	53.08
Mileage	Callahan, Colin P	26-MAY-22	EXP8339629	81.90	1.0800	88.45
Mileage	Chan, Nicholas (Nick)	26-MAY-22	EXP8340380	79.44	1.0800	85.80
Total Reimbursable				**486.38**		**525.16**

Task Total : **2022 GW Supp Install** **2,754.91**

Project Total : **UNITIL PHYTOREMEDIATION PROGRAM** **2,754.91**

Invoice Summaries

Total Current Amount :	2,754.91
Retention Amount :	0.00
Pre-Tax Amount :	2,754.91
Tax Amount :	0.00
Total Invoice Amount :	**2,754.91**

OK to Pay

Billing Summaries

Billing Summary	Current	Prior	Total	Limit	Remain
Billings	2,754.91	358,305.46	361,060.37	382,678.59	21,618.22
Tax	0.00	0.00	0.00		
Billing Total :	2,754.91	358,305.46	361,060.37		

Outstanding Invoices

Invoice Number		Invoice Date	Invoice Balance
2000626357	PAID	20-MAY-22	1,746.11
2000633989		10-JUN-22	2,754.91
	Outstanding Total :		4,501.02

PO 78165 30.40.00.00.182.29.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	14-MAY-22 - 20-MAY-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	Callahan, Colin P
Employee Number	:	647972
Draft Number	:	117

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		14-MAY	15-MAY	16-MAY	17-MAY	18-MAY	19-MAY	20-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
			Total :	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00

Callahan, Colin P
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours:	1.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	21-MAY-22 - 27-MAY-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	Callahan, Colin P
Employee Number	:	647972
Draft Number	:	117

			SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type	21-MAY	22-MAY	23-MAY	24-MAY	25-MAY	26-MAY	27-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.00	0.00	6.00	0.00	6.00
		Total :	0.00	0.00	0.00	0.00	0.00	6.00	0.00	6.00

Callahan, Colin P

Employee Signature

Approver For Employee Signature

Stiller, Michael

Approver Signature

Total Regular Hours:	6.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	21-MAY-22 - 27-MAY-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	Chan, Nicholas (Nick)
Employee Number	:	725473
Draft Number	:	117

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		21-MAY	22-MAY	23-MAY	24-MAY	25-MAY	26-MAY	27-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00
			Total :	0.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00

Chan, Nicholas (Nick)
Employee Signature

Approver For Employee Signature

McCarthy, Ryan S
Approver Signature

Total Regular Hours:	5.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 30-APR-22 - 06-MAY-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : McCarthy, Ryan S
Employee Number : 648137
Draft Number : 117

			SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type	30-APR	01-MAY	02-MAY	03-MAY	04-MAY	05-MAY	06-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50
		Total :	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours:	0.50
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period	:	07-MAY-22 - 13-MAY-22
Organization	:	41.ACM.US_ME.7965
Assignment Category	:	A - Full Time
Employee Category	:	Exempt
Employee Name	:	McCarthy, Ryan S
Employee Number	:	648137
Draft Number	:	117

			SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type	07-MAY	08-MAY	09-MAY	10-MAY	11-MAY	12-MAY	13-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs	0.00	0.00	0.00	0.50	0.00	0.50	0.00	1.00
		Total :	0.00	0.00	0.00	0.50	0.00	0.50	0.00	1.00

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Albrecht, John
Approver Signature

Total Regular Hours:	1.00
Total Overtime Hours:	0.00
Total Non-Worked Hours:	0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 14-MAY-22 - 20-MAY-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : McCarthy, Ryan S
Employee Number : 648137
Draft Number : 117

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		14-MAY	15-MAY	16-MAY	17-MAY	18-MAY	19-MAY	20-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50
			Total :	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours: 0.50
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Technology Corporation
Employee Timesheet

Timecard Period : 21-MAY-22 - 27-MAY-22
Organization : 41.ACM.US_ME.7965
Assignment Category : A - Full Time
Employee Category : Exempt
Employee Name : McCarthy, Ryan S
Employee Number : 648137
Draft Number : 117

				SAT	SUN	MON	TUE	WED	THUR	FRI	
Project	Task	Type		21-MAY	22-MAY	23-MAY	24-MAY	25-MAY	26-MAY	27-MAY	Total
60139734 UNITIL ROCHESTER PHYTO	1500 2022 GW Supp Install	Regular Hrs		0.00	0.00	0.50	0.50	0.00	3.00	0.00	4.00
			Total :	0.00	0.00	0.50	0.50	0.00	3.00	0.00	4.00

McCarthy, Ryan S
Employee Signature

Approver For Employee Signature

Tammi, Carl E
Approver Signature

Total Regular Hours: 4.00
Total Overtime Hours: 0.00
Total Non-Worked Hours: 0.00

AECOM Imagine it.
Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

June 10, 2022

AECOM Reference
60139734-Inv. 119

Mr. Thomas Murphy
Unitil Services Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Invoice for Activities Related to 2022 Phytoremediation Program
Petrolane/ Northern Utilities, Inc. Site (DES #198712002, Project #432)
32 Gonic Road, Rochester, NH
Period Ending May 27, 2022

Dear Mr. Murphy,

Enclosed for your information is an invoice and Progress Report for professional environmental consulting services related to the 2022 Phytoremediation Program. Elements of the Phytoremediation Program include continued groundwater suppression maintenance and evaluation activities at the former manufactured gas plant located at the above referenced property.

Project Budget Information

This invoice is for $2,754.91. The total authorized budget for this project for the 2022 calendar year is $22,600. As part of the scope of work, AECOM will perform six limited and two full irrigation events at the Site during the 2022 growing seasons (April – October). AECOM will also perform Site inspections on a bi-monthly basis for the calendar year. This project was originally proposed on a time and materials basis to be billed on a monthly basis.

Work Performed

The following section briefly describes work and charges for this invoicing period for each task:

Task 1500 2022 Continued Groundwater Suppression Evaluation Activities

During this invoicing period, costs incurred were related to a May Site inspection, and expenses associated with the April/ May site visits. As detailed in Table 1 and the attached invoice, costs associated with these tasks was $2,754.91.

If you have any questions regarding this invoice, please do not hesitate to call me at 603-770-4945. It has been a pleasure assisting you with this important project, and we look forward to providing additional service in the future.

Yours sincerely,

Ryan McCarthy, MS
Project Manager
AECOM
E: ryan.mccarthy@aecom.com

Table 1 Invoice Summary
2022 Phytoremediation Program
May 2022 Billing Period

Task		Authorized Budget	Previously Invoiced	Current Invoice	Total Invoiced	Remaining Budget
1500	Continued Groundwater Suppression Installation Activities 2022	$ 22,600.00	$ 3,743.11	$ 2,754.91	$ 6,498.02	$ 16,101.98
Total		**$22,600.00**	**$3,743.11**	**$2,754.91**	**$6,498.02**	**$16,101.98**

2022 Phyto Funding $22,600

City of Rochester

19 Wakefield Street
Rochester, New Hampshire

7 7 0 7 1

WATER & SEWER BILL

Customer Copy
Keep this portion for your records

CUSTOMER NAME	SERVICE LOCATION
NORTHERN UTILITIES INC	770 COLUMBUS

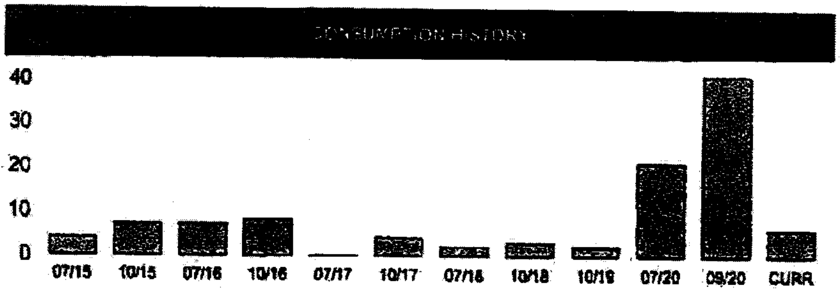
BILL NUMBER	BILL DATE	ACCOUNT #	DUE DATE
14100490	07/27/2021	152340	08/23/2021

CHARGE DESCRIPTION	READ CODE	PREVIOUS READ DATE	CURRENT READ DATE	PREVIOUS READING	CURRENT READING	USAGE	CHARGE AMOUNT
COMM WATER	A	09/30/2020	06/29/2021	166	172	6	$34.41
TURN ON			11/30/2020				$30.00

ok Ni
8/2/21

100 CU FT. = 748 Gallons
Rate per 100 cubic feet

Interest accrues daily from the past due date at the rate of 8% interest per annum computed to the payment date.



READ CODE		
A = Actual	Total Current Billing	$64.41
E = Estimate	Previous Balance	$227.65
F = Final	Adjustments	$0.00
	Less Payments Received	$227.65
	Total Amount Due	$64.41

PAYMENTS ONLINE AT WWW.ROCHESTERNH.NET
WATER $5.63 PER UNIT, MIN. $22.14; SEWER $7.45 PER UNIT, MIN. $34.31
HTTPS://WWW.ROCHESTERNH.NET/PUBLIC-WORKS/FILES/2020-CCR

DETACH AND RETURN THE PORTION BELOW WITH YOUR PAYMENT

City of Rochester
19 Wakefield Street
Rochester, New Hampshire

WATER & SEWER BILL
Customer Copy
Keep this portion for your records

7 7 0 7 1

CUSTOMER NAME	SERVICE LOCATION
NORTHERN UTILITIES INC	770 COLUMBUS

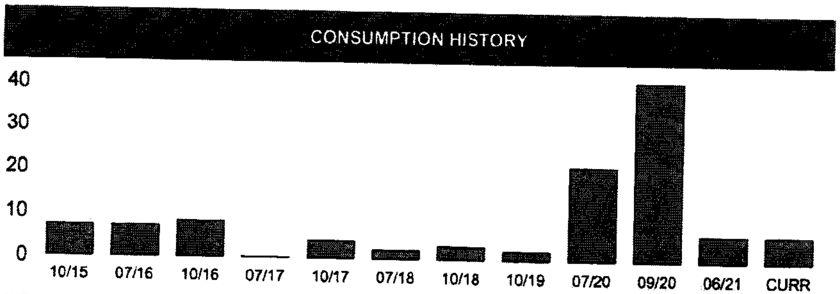
BILL NUMBER	BILL DATE	ACCOUNT #	DUE DATE
101640	10/28/2021	152340	12/01/2021

CHARGE DESCRIPTION	READ CODE	PREVIOUS READ DATE	CURRENT READ DATE	PREVIOUS READING	CURRENT READING	USAGE	CHARGE AMOUNT
COMM WATER	A	06/29/2021	10/04/2021	172	178	6	$34.98

ok NC
PO# 77071
11/5/21

100 CU FT. = 748 Gallons
Rate per 100 cubic feet

Interest accrues daily from the past due date at the rate of 8% interest per annum computed to the payment date.



READ CODE	Total Current Billing		**$34.98**
A = Actual	Previous Balance		**$64.41**
E = Estimate	Adjustments		**$0.00**
F = Final	Less Payments Received		**$64.41**
	Total Amount Due		$34.98

PAYMENTS ONLINE AT WWW.ROCHESTERNH. NET
WATER $5.83 PER UNIT, MIN $22.14; SEWER $7.43 PER UNIT, MIN $34.31
MASTERCARD, DISCOVER, AMX PAYMENTS AT TAX OFFICE, 2.79% SURCHARGE

✂ DETACH AND RETURN THE PORTION BELOW WITH YOUR PAYMENT ✂

City of Rochester

19 Wakefield Street
Rochester, New Hampshire

WATER & SEWER BILL

Customer Copy
Keep this portion for your records

CUSTOMER NAME	SERVICE LOCATION
NORTHERN UTILITIES INC	[illegible]

BILL NUMBER	BILL DATE	ACCOUNT #	DUE DATE
[illegible]	[illegible]	152249	[illegible]

[illegible]

TURN OFF	11/30/2021	$30.00

7 8 5 6 0

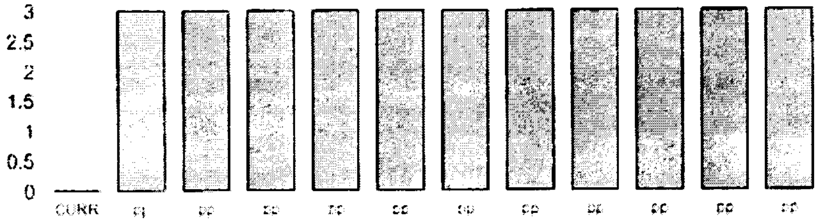
RECEIVED
FEB 2 2022
Accounts Payable

OK NC
2/2/22

100 CU FT. = 748 Gallons
Rate per 100 cubic feet

Interest accrues daily from the past due date at the rate of 8% interest per annum computed to the payment date.

CONSUMPTION HISTORY



[illegible]

READ CODE		
	Total Current Billing	$30.00
A = Actual	Previous Balance	$34.98
E = Estimate	Adjustments	$0.00
F = Final	Less Payments Received	$34.98
	Total Amount Due	**$30.00**

RETURN THE PORTION BELOW WITH YOUR PAYMENT

City of Rochester
209 Chestnut Hill Rd.
Rochester, NH 03867

78560

WATER & SEWER BILL

Customer Copy
Keep this portion for your records

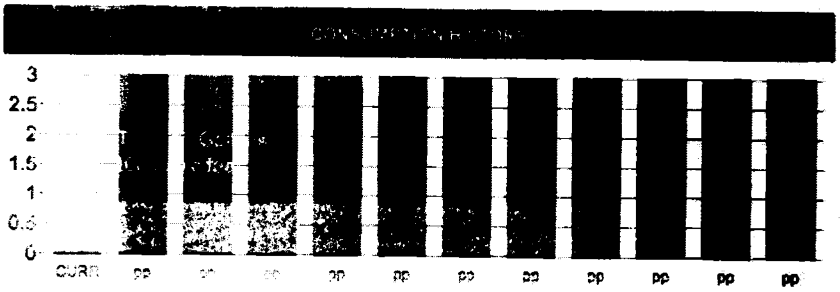
CUSTOMER NAME	
NORTHERN UTILITIES INC	770 COLUMBUS

BILL NUMBER	[illegible]		
14121655	04/21/2022	152340	05/25/2022

CHARGE DESCRIPTION	READ CODE	PREVIOUS READ DATE	[illegible]	[illegible]
TURN ON			04/14/2022	$30.00

100 CU FT. = 748 Gallons
Rate per 100 cubic feet

Interest accrues daily from the past due date at the rate of 8% interest per annum computed to the payment date.



READ CODE		
A = Actual	Total Current Billing	$30.00
E = Estimate	Previous Balance	$30.00
F = Final	Adjustments	$0.00
	Less Payments Received	$30.00

PAYMENTS ONLINE AT WWW.ROCHESTERNH.NET
WATER $5.53 PER UNIT, MIN. $23.[illegible], SEWER $7.43 PER UNIT, MIN. $34.31
MASTERCARD, DISCOVER [illegible] PAYMENTS AT TAX OFFICE 2.79% SURCHARGE

Schedule 5
Cost Amortization

Schedule 5
Page 1 of 1

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
CALCULATION OF EXCESS ENVIRONMENTAL RESPONSE COST AMORTIZATION

Line No.	Description	July 10 - June 11	July 11 - June 12	July 12 - June 13	July 13 - June 14	July 14 - June 15	July 15 - June 16	July 16 - June 17	July 17 - June 18	July 18 - June 19	July 19 - June 20	July 20 - June 21	July 21 - June 22
1	NH FIRM GAS REVENUES FROM PRIOR PERIOD (includes total firm and transportation (excluding off-system revenues))	$ 57,304,148	$ 48,937,053	$ 49,683,620	$63,862,785	$73,145,859	$51,311,654	$59,038,627	$66,568,530	$74,616,651	$61,186,711	$67,254,093	$80,378,260
2	5% of Line 1	$ 2,865,207	$ 2,446,853	$ 2,484,181	$ 3,193,139	$ 3,657,293	$ 2,565,583	$ 2,951,931	$ 3,328,426	$ 3,730,833	$ 3,059,336	$ 3,362,705	$ 4,018,913
3	TOTAL ERC COST TO BE RECOVERED (FROM SCHEDULE 1, Line 7)	$ 121,209	$ 159,020	$ 175,406	$ 40,881	$ 112,198	$ 2,179,885	$54,154	$283,143	$203,357	$77,165	$118,256	$48,434
4	EXCESS AMORTIZATION DEFERRED FROM PRIOR YEARS	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	CARRYING CHARGES	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	EXCESS AMORTIZATION FROM PRIOR YEARS PLUS CARRYING CHARGES (LINE 4 PLUS LINE 5)	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	TOTAL POTENTIAL ERC COST TO RECOVERED (LINE 3 PLUS LINE 6)	$ 121,209	$ 159,020	$ 175,406	$ 40,881	$ 112,198	$ 2,179,885	$ 54,154	$ 283,143	$ 203,357	$ 77,165	$ 118,256	$ 48,434
8	EXCESS AMORTIZATION TO BE DEFERRED (LINE 2 LESS LINE 7; IF POSITIVE ENTER ZERO)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	EXCESS AMORTIZATION FROM PRIOR PLUS CARRYING CHARGES TO BE RECOVERED (LINE 7 MINUS LINE 3; IF NEGATIVE ENTER ZERO)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Note: July 2014 - June 2018 data shown in line 1 has been corrected from prior filings to reflect the July - June period.

Attachment A

Insurance Recovery Allocation

Northern Utilities, Inc. - New Hampshire Division
Allocation of Environmental Insurance Recoveries

ERC Recovery Allocation

	Allocation %	Recovery Amount	% of Recovery Total	Resolution Fee	% of Resolution Fee
Recovery Total		**$ -**			
Dispute Resolution Fee				**$0.00**	**0.0%**
New Hampshire					
MGP Sites	0.00%	**$0.00**		**$0.00**	
Ratepayer	100.00%	$0.00		$0.00	
Non - MGP	0.00%	$0.00		$0.00	
Total		**$0.00**	**0.0%**	**$0.00**	**0.0%**

Northern Utilities, Inc. - New Hampshire Division
Allocation of Environmental Insurance Recoveries

ERC Recovery Allocation

	Allocation %	Recovery Amount	% of Recovery Total	Resolution Fee	% of Resolution Fee
Recovery Total		**$ -**			
Dispute Resolution Fee				**$0.00**	**0.0%**
MGP Sites	0.00%	**$0.00**		**$0.00**	
Shareholder	0.00%	$0.00		$0.00	
Ratepayer	0.00%	$0.00		$0.00	
Non - MGP	0.00%	$0.00		$0.00	
Total		**$0.00**	**0.0%**	**$0.00**	**0.0%**
New Hampshire					
MGP Sites	0.00%	**$0.00**		**$0.00**	
	0.00%				
Ratepayer	0.00%	$0.00		$0.00	
Non - MGP	0.00%	$0.00		$0.00	
Total		**$0.00**	**0.0%**	**$0.00**	**0.0%**
Maine					
Shareholder	50.00%	$0.00		$0.00	
Ratepayer	50.00%	$0.00		$0.00	
Total		**$0.00**	**0.0%**	**$0.00**	**0.0%**

Attachment A
Page 2 of 2

Northern Utilities, Inc.- New Hampshire Division
2022 - 2023 Environmental Response Costs

			Allocation Amount	**New Hampshire** **05900**	
			0.0%		
Vendor Name	Invoice #	**Total Invoice**	**NH**	517628	517629
		$0.00	$0.00		$0.00
Total		$0.00	$0.00	$0.00	$0.00

Total Insurance Expense **$0.00**

Total Insurance Recovery $0.00

Contracting Project Manager

Intentionally Left Blank

COMPANY NAME

NORTHERN UTILITIES, INC.

EXETER GAS WORKS

LINE NO.

Schedule 4A

1. SITE LOCATION: Water Street and Green Street in Exeter, NH

2. DATE SITE WAS FIRST INVESTIGATED AS A DISPOSAL SITE:
The U.S. Environmental Protection Agency (EPA) conducted a Preliminary Assessment in 1982

3. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES (July 1, 2021 – June 30, 2022):

- Northern continues to retain AECOM to coordinate communications with the Exeter Housing Authority (EHA), Exeter Department of Public Works (DPW), and Philips Exeter Academy (PEA). Although AECOM has also been retained to manage groundwater sampling associated with the Site's Groundwater Monitoring Program (GMP), no remediation-related activities were conducted by AECOM during the reporting time period.

- In July 2021, Northern received notification from the DPW of a sewer expansion project that included three horizontal directional drills under the Squamscott River and connection to the recently rebuilt lift station adjacent to the EHA and within the Site's GMP. In September 2021, AECOM concluded that the DPW sewer expansion project would not impact the area covered by the GMP (See Exhibit 1, Schedule 4A).

4. NEW HAMPSHIRE SITE REMEDIATION PROGRAM PHASE:

The former Exeter Gas Works continues to progress towards site closure via the NH DES overseen GMP. However, no remediation work was conducted during the reporting time period.

5. NATURE AND SCOPE OF SITE CONTAMINATION:

Areas containing residual materials from the historic operation and decommissioning of the former manufactured gas plant were discovered on small parcels of land on the north and south sides of Water Street. These residuals, which include coal tars and oils, were found in the soil at discrete locations and in underlying groundwater. The objective of the cleanup project, as discussed with the NH DES, has been to stabilize affected soils to the extent practicable and to enhance the natural attenuation of any residuals in groundwater.

Northern prepared a project Completion Report that was submitted to NH DES in January 2002. The Completion report documented that all construction work was completed in accordance with the Remedial Action Plan (RAP) that was submitted to the NH DES in October 2001. The remedy consisted of the in-situ solidification of MGP residuals on the main parcel by auger mixing using a formulation of Portland cement and organophilic clay followed by grading and planting for site closure. The remedy also consisted of the injection of an oxygen release compound (ORC) into the soils and groundwater in the vicinity of the former settling lagoons on Exeter Housing Authority property. Finally, activity and use restrictions were noticed on the affected property deeds.

Subsequent to the completion of the site remediation, MGP residuals were identified in sediments at the mouth of a stormwater outfall discharging into the Squamscott River. The residuals were discharged to the storm sewer system as part of the process activities during the operation of the MGP. The sediment impacts were remediated successfully in 2016 with NH DES required monitoring of the Squamscott River continuing into and eventually terminating in 2017.

6. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP OF SITE:

The Exeter Gas Works operated from 1864 through 1955. The gas works was owned and operated by several companies during that time, including Exeter Gas Light Company in 1864, Strafford-York Gas Company in 1911, and Allied New Hampshire Gas Company in 1942. Allied New Hampshire Gas Company was a predecessor of Northern Utilities. Northern sold the eastern portion of the property to the Town of Exeter in 1978. In 1981 the eastern portion of the former MGP property was transferred to the EHA. This portion of the site is currently used for elderly housing. The western portion of the former MGP is currently owned by Northern and is a landscaped park, which serves as a cap to the underlying stabilized soil.

7. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS: None

NAME OF SUIT: Not Applicable

DATE FILED: Not Applicable

STATUS (PENDING/SETTLED): Not Applicable

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978.905.2100 tel
978.905.2101 fax

September 27, 2021

Thomas Murphy
Manager, Environmental Compliance and Business Continuity
Unitil Corp.
6 Liberty Lane West
Hampton, NH 03842

Subject: Town of Exeter Horizontal Directional Drill Evaluation

Dear Tom,

As discussed previously, the Town of Exeter (Town) is planning to install a drain siphon across the Squamscott River and through the Swasey Parkway (Parkway) to the Town's pump station. The installation will involve the horizontal directional drilling (HDD) of three lines under the river with the exit pit located in the Parkway and within the Groundwater Management Zone for the former Manufactured Gas Plant (MGP) site. Note that in 2020, AECOM provided oversight for the installation of test borings in the area of the exit pit and did not observe evidence of MGP impacts. In September 2021, AECOM conducted a field investigation that confirmed that MGP residuals are not present in the path of the HDD lines. A summary of the investigation activities and findings is provided below.

On September 8th, AECOM met with Kevin Garvey, the Town's Engineering Firm, Wright-Pierce, to delineate the investigation area within the Parkway. The information was used by AECOM's drilling subcontractor, Geosearch, Inc., in contacting Dig Safe to mark utility lines in the area.

On September 13th, a private utility locating company, TPI Environmental, Inc., conducted a geophysical survey of the investigation area and specifically cleared the nine (9) boring locations, i.e. three boring locations along the proposed path of each of the three HDD lines. Geosearch staff then used a vacuum truck to pre-clear the locations to a depth of at least one meter below ground surface (bgs). The soil from the preclearing activities was returned to the locations in the order they were removed at the end of the day.

On September 15th, Geosearch advanced the borings to the depths determined by Wright-Pierce as appropriate to intersect the intended paths of the HDD lines. The HDD lines were identified as 1, 2, and 3 (upstream to downstream). The sampling locations along the lines were identified as follows:

- East - closest to the Squamscott River at a depth of 28 ft. bgs;
- Center - at a depth of 22 ft. bgs; and
- West - closest to the structure at a depth of 6 ft. bgs.

AECOM staff prepared boring logs for each location (Attachment A). They provide the following findings:

- The water table was observed at approximately 5 ft. bgs;

- Soil in the investigation area was observed to be primarily sand, gravel, and silt with some cobble; and
- Odor and staining were not observed.

AECOM collected composite soil samples at each location from the interval of +2 ft. to -2 ft. of the intended path of the lines. The samples were analyzed for the principal indicators of MGP residuals: benzene, toluene, ethylbenzene, xylenes, and naphthalene. The results from the analyses are summarized in Table 1. As illustrated in the Table, the constituent concentrations were determined to be less than the reportable concentration limits for the analyses and were significantly less than the Soil Remediation Criteria established by the New Hampshire Department of Environmental Services (NHDES). The laboratory report is provided as Attachment B.

A review of the field sampling observations and analytical results allows us to conclude that there is no evidence of the presence of MGP contamination in the investigation area. Please give me a call if we can provide any additional information related to these activities or the project in general.

Best Regards,

Colin Callahan — Mark McCabe

Project Manager — Vice President, Account Management

Cc: Kevin Garvey, Wright-Pierce

Table 1
Summary of Results
HDD Path Characterization
Swasey Parkway, Exeter, NH
September 15, 2021

Sample		Constituent Concentration (mg/Kg)				
Location	**Depth (ft. bgs)**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**Naphthalene**
West 1	4-8	<0.005	<0.005	<0.005	<0.015	<0.005
West 2	4-8	<0.003	<0.003	<0.003	<0.009	<0.003
West 3	4-8	<0.002	<0.002	<0.002	<0.007	<0.002
Center 1	20-24	<0.004	<0.004	<0.004	<0.012	<0.004
Center 2	20-24	<0.005	<0.005	<0.005	<0.013	<0.005
Center 3	20-24	<0.006	<0.006	<0.006	<0.017	<0.006
East 1	26-30	<0.003	<0.003	<0.003	<0.010	<0.003
East 2	26-30	<0.004	<0.004	<0.004	<0.011	<0.004
East 3	26-30	<0.005	<0.005	<0.005	<0.013	<0.005
NHDES Remediation Criteria [1]		**0.3**	**100**	**120**	**500**	**5**

Notes:

1 Env-Or 606.19

bgs below ground surface

Attachment A

Boring Logs

AECOM
250 Apollo Drive, Chelmsford MA 01824
(978) 905-2100 - office

EAST-1

Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~5'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 30'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-6	6"	0.0	Brown-dark brown F-M SAND, tight, wet at 5', no odors
5-10		11"	0.0	Grey-dark brown F SAND, trace GRAVEL, tight, damp, no odors
10-15		18"	0.0	SAA
15-20		0"	0.0	NO RECOVERY
20-25		42"	0.0	Grey SILT, trace F SAND, loose, wet, no odors
25-30		58"	0.0	SAA

End of Boring at 30'
No Refusal Encountered

Sample Collected

East-1(26-30')_091521 @ 1230 for BTEX & Naphthalene

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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EAST-2

Page 1 of 1

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~5'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 30'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-5.5	5"	0.0	Brown-dark brown F-M SAND, tight, wet at 5', no odors
5-10		12"	0.0	Grey brown F SAND, tight, damp, no odors
10-15		18"	0.0	Grey SILT, trace F SAND, loose, wet, no odors
15-20		30"	0.0	SAA
20-25		48"	0.0	SAA
25-30		46"	0.0	SAA

End of Boring at 30'
No Refusal Encountered

Sample Collected

East-2(26-30')_091521 @ 1200 for BTEX & Naphthalene

Comments:
NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

Exhibit 1 Schedule 4A

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EAST-3

Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐Stick Up ☐Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~5'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 30'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-5.5	6"	0.0	Brown F-M SAND, tight, wet at 5', no odors
5-10		10"	0.0	Grey F SAND, tight, damp, no odors
10-15		16"	0.0	10-12 SAA 12-12.5 COBBLE 12.5-15 Grey SILT, trace F SAND, loose, wet, no odor
15-20		22"	0.0	SAA
20-25		40"	0.0	SAA
25-30		44"	0.0	SAA

End of Boring at 30'
No Refusal Encountered

Sample Collected

East-3(26-30')_091521 @ 1130 for BTEX & Naphthalene

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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CENTER-1

Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~5'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 25'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-5.5	9"	0.0	Brown-dark brown F-M SAND, tight, wet at 5', no odors
5-10		12"	0.0	Grey F SAND, trace C SAND, tight, damp, no odors
10-15		13"	0.0	Grey SILT, trace F SAND, loose, wet, no odors
15-20		30"	0.0	SAA
20-25		44"	0.0	SAA

End of Boring at 25'
No Refusal Encountered

Sample Collected	Comments:
Center-1(20-24')_091521 @ 1100 for BTEX & Naphthalene	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

CENTER-2

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Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~5'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 25'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-5.5	10"	0.0	Brown-dark brown F-M SAND, tight, wet at 5', no odors
5-10		13"	0.0	Grey F SAND, tight, damp, no odors
10-15		13"	0.0	10-10.5 Grey GRAVEL 10.5-15 Grey SILT, trace F SAND, loose, wet, no odors
15-20		24"	0.0	SAA
20-25		40"	0.0	SAA

End of Boring at 25'
No Refusal Encountered

Sample Collected	**Comments:**
Center-2(20-24')_091521 @ 1030 for BTEX & Naphthalene	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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CENTER-3

Page 1 of 1

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~5'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 25'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-5.5	9"	0.0	Brown-dark brown F-M SAND, tight, wet at 5', no odors
5-10		12"	0.0	Grey F SAND, tight, damp, no odors
10-15		14"	0.0	10-10.5 Grey GRAVEL 10.5-15 Grey SILT, trace F SAND, loose, wet, no odors
15-20		24"	0.0	SAA
20-25		42"	0.0	SAA

End of Boring at 25'
No Refusal Encountered

Sample Collected	**Comments:**
Center-3(20-24')_091521 @ 1000 for BTEX & Naphthalene	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

Exhibit 1 Schedule 4A

AECOM

WEST-1

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Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~3'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 10'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	**Hand Clear Depth (feet)**	**Re-covery (in)**	**10.6 PID (ppm)**	**Ground Surface: grass**
0-5	0-3.5	6"	0.0	Brown F-M SAND, trace GRAVEL, medium tightness, wet at 3', no odors
5-10		6"	0.0	Brown-grey F-M SAND and GRAVEL, trace COBBLES and SILT, iron modeling, medium tightness, wet, no odors

End of Boring at 10'
No Refusal Encountered

Sample Collected	**Comments:**
West-1(4-8')_091521 @ 0930 for BTEX & Naphthalene	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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WEST-2

Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~3'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 10'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	**Hand Clear Depth (feet)**	**Re-covery (in)**	**10.6 PID (ppm)**	**Ground Surface: grass**
0-5	0-3.5	13"	0.0	Tan-brown M-C SAND, some COBBLES, medium tightness, wet at 3', no odors
5-10		15"	0.0	5-9 SAA 9-10 Brown-grey F SAND and SILT, loose, wet, no odors

End of Boring at 10'
No Refusal Encountered

Sample Collected	**Comments:**
West-2(4-8')_091521 @ 0900 for BTEX & Naphthalene	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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WEST-3

Page ___1___ of ____1___

Project Name: Exeter NH - Unitil Gas	**Drilling Company: Geosearch**	**Surface Comp: Flush ☐ Stick Up ☐ Height:**
Project Number: 60536962.300	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**
Date Started Drilling: 9/15/2021	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**
Date Finished Drilling: 9/15/2021	**Date Pre-Cleared: 9/13/2021**	**Riser (bgs):**
Location: Swasey Parkway, Exeter NH	**Water Level While Drilling (bgs): ~3'**	**Well Scrn: Depth (bgs):**
Logged By: C. Callahan	**Total Depth of Boring (bgs): 10'**	**2" PVC 10-slot**

(Note: bgs = below ground surface)

Depth Range (feet)	Hand Clear Depth (feet)	Re-covery (in)	10.6 PID (ppm)	Ground Surface: grass
0-5	0-3.5	2"	0.0	Brown F SAND and SILT, medium tightness, wet at 3', no odors
5-10		30"	0.0	5-7.5 Grey C SAND, loose, wet, no odors 7.5-10 Grey SILT, loose, wet, no odors

End of Boring at 10'
No Refusal Encountered

Sample Collected	**Comments:**
West-3(4-8')_091521 @ 0830 for BTEX & Naphthalene	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

Attachment B

Analytical Report

eurofins

Environment Testing
America

ANALYTICAL REPORT

Eurofins Environment Testing New England
646 Camp Ave
North Kingstown, RI 02852
Tel: (413)789-9018

Laboratory Job ID: 620-1161-1
Client Project/Site: Unitil - Exeter, NH

For:
AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

Attn: Colin Callahan

Agnes R Huntley

Authorized for release by:
9/23/2021 4:55:30 PM

Agnes Huntley, Project Manager
(401)372-3482
agnes.huntley@eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Definitions/Glossary

Exhibit 1 Schedule 4A

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Job ID: 620-1161-1

Laboratory: Eurofins Environment Testing New England

Narrative

Job Narrative
620-1161-1

Comments
No additional comments.

Receipt
The samples were received on 9/16/2021 2:05 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.9º C.

GC/MS VOA
Method 8260C: Internal standard responses were outside of acceptance limits for the following sample: West-1 (4-8')_091521 (620-1161-3). The sample(s) shows evidence of a poor purge due to matrix interference. The sample was re-analized to verify the interference.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Client Sample ID: West-3 (4-8')_091521 — Lab Sample ID: 620-1161-1

No Detections.

Client Sample ID: West-2 (4-8')_091521 — Lab Sample ID: 620-1161-2

No Detections.

Client Sample ID: West-1 (4-8')_091521 — Lab Sample ID: 620-1161-3

No Detections.

Client Sample ID: Center-3 (20-24')_091521 — Lab Sample ID: 620-1161-4

No Detections.

Client Sample ID: Center-2 (20-24')_091521 — Lab Sample ID: 620-1161-5

No Detections.

Client Sample ID: Center-1 (20-24')_091521 — Lab Sample ID: 620-1161-6

No Detections.

Client Sample ID: East-3 (26-30')_091521 — Lab Sample ID: 620-1161-7

No Detections.

Client Sample ID: East-2 (26-30')_091521 — Lab Sample ID: 620-1161-8

No Detections.

Client Sample ID: East-1 (26-30')_091521 — Lab Sample ID: 620-1161-9

No Detections.

Client Sample ID: Trip Blank — Lab Sample ID: 620-1161-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client Sample ID: West-3 (4-8')_091521

Lab Sample ID: 620-1161-1

Date Collected: 09/15/21 08:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 82.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.25		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1
Ethylbenzene	ND		2.25		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1
Toluene	ND		2.25		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1
m,p-Xylene	ND		2.25		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1
o-Xylene	ND		2.25		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1
Xylenes, Total	ND		6.74		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1
Naphthalene	ND		2.25		ug/Kg	☼	09/22/21 09:58	09/22/21 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/22/21 09:58*	*09/22/21 16:38*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*09/22/21 09:58*	*09/22/21 16:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*	*09/22/21 09:58*	*09/22/21 16:38*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*	*09/22/21 09:58*	*09/22/21 16:38*	*1*

Client Sample ID: West-2 (4-8')_091521

Lab Sample ID: 620-1161-2

Date Collected: 09/15/21 09:00
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 90.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.85		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1
Ethylbenzene	ND		2.85		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1
Toluene	ND		2.85		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1
m,p-Xylene	ND		2.85		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1
o-Xylene	ND		2.85		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1
Xylenes, Total	ND		8.56		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1
Naphthalene	ND		2.85		ug/Kg	☼	09/22/21 09:58	09/22/21 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:05*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:05*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:05*	*1*

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Client Sample Results

Client Sample ID: West-1 (4-8')_091521

Lab Sample ID: 620-1161-3

Date Collected: 09/15/21 09:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 81.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.95		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1
Ethylbenzene	ND		4.95		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1
Toluene	ND		4.95		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1
m,p-Xylene	ND		4.95		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1
o-Xylene	ND		4.95		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1
Xylenes, Total	ND		14.8		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1
Naphthalene	ND		4.95		ug/Kg	☼	09/23/21 11:33	09/23/21 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:44*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*119*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:44*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:44*	*1*

Client Sample Results

Client Sample ID: Center-3 (20-24')_091521

Lab Sample ID: 620-1161-4

Date Collected: 09/15/21 10:00
Date Received: 09/16/21 14:05

Matrix: Solid
Percent Solids: 73.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.68		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1
Ethylbenzene	ND		5.68		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1
Toluene	ND		5.68		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1
m,p-Xylene	ND		5.68		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1
o-Xylene	ND		5.68		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1
Xylenes, Total	ND		17.0		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1
Naphthalene	ND		5.68		ug/Kg	☼	09/22/21 09:58	09/22/21 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:57*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:57*	*1*
Dibromofluoromethane (Surr)	*110*		*70 - 130*	*09/22/21 09:58*	*09/22/21 17:57*	*1*

Client Sample Results

Client Sample ID: Center-2 (20-24')_091521
Lab Sample ID: 620-1161-5
Date Collected: 09/15/21 10:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 73.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.28		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1
Ethylbenzene	ND		4.28		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1
Toluene	ND		4.28		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1
m,p-Xylene	ND		4.28		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1
o-Xylene	ND		4.28		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1
Xylenes, Total	ND		12.8		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1
Naphthalene	ND		4.28		ug/Kg	☼	09/22/21 09:58	09/22/21 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:24*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:24*	*1*
Dibromofluoromethane (Surr)	*110*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:24*	*1*

Client Sample Results

Client Sample ID: Center-1 (20-24')_091521

Lab Sample ID: 620-1161-6

Date Collected: 09/15/21 11:00
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 73.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.98		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1
Ethylbenzene	ND		3.98		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1
Toluene	ND		3.98		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1
m,p-Xylene	ND		3.98		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1
o-Xylene	ND		3.98		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1
Xylenes, Total	ND		11.9		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1
Naphthalene	ND		3.98		ug/Kg	☼	09/22/21 09:58	09/22/21 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:50*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:50*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*	*09/22/21 09:58*	*09/22/21 18:50*	*1*

Client Sample Results

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Client Sample ID: East-3 (26-30')_091521

Date Collected: 09/15/21 11:30
Date Received: 09/16/21 14:05

Lab Sample ID: 620-1161-7

Matrix: Solid
Percent Solids: 68.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.26		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1
Ethylbenzene	ND		4.26		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1
Toluene	ND		4.26		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1
m,p-Xylene	ND		4.26		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1
o-Xylene	ND		4.26		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1
Xylenes, Total	ND		12.8		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1
Naphthalene	ND		4.26		ug/Kg	☼	09/22/21 09:58	09/22/21 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:17*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:17*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:17*	*1*

Client Sample Results

Client Sample ID: East-2 (26-30')_091521

Lab Sample ID: 620-1161-8

Date Collected: 09/15/21 12:00

Matrix: Solid

Date Received: 09/16/21 14:05

Percent Solids: 69.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.73		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1
Ethylbenzene	ND		3.73		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1
Toluene	ND		3.73		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1
m,p-Xylene	ND		3.73		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1
o-Xylene	ND		3.73		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1
Xylenes, Total	ND		11.2		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1
Naphthalene	ND		3.73		ug/Kg	☼	09/22/21 09:58	09/22/21 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:43*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:43*	*1*
Dibromofluoromethane (Surr)	*111*		*70 - 130*	*09/22/21 09:58*	*09/22/21 19:43*	*1*

Client Sample Results

Client Sample ID: East-1 (26-30')_091521

Lab Sample ID: 620-1161-9

Date Collected: 09/15/21 12:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 70.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.48		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1
Ethylbenzene	ND		3.48		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1
Toluene	ND		3.48		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1
m,p-Xylene	ND		3.48		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1
o-Xylene	ND		3.48		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1
Xylenes, Total	ND		10.4		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1
Naphthalene	ND		3.48		ug/Kg	☼	09/22/21 09:58	09/22/21 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/22/21 09:58*	*09/22/21 20:10*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*09/22/21 09:58*	*09/22/21 20:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 130*	*09/22/21 09:58*	*09/22/21 20:10*	*1*
Dibromofluoromethane (Surr)	*112*		*70 - 130*	*09/22/21 09:58*	*09/22/21 20:10*	*1*

Client Sample Results

Client Sample ID: Trip Blank

Lab Sample ID: 620-1161-10

Date Collected: 09/15/21 00:00
Date Received: 09/16/21 14:05

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:46	1
Ethylbenzene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:46	1
Toluene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:46	1
m,p-Xylene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:46	1
o-Xylene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:46	1
Xylenes, Total	ND		15.0		ug/Kg		09/22/21 09:58	09/22/21 15:46	1
Naphthalene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:46*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:46*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:46*	*1*

Surrogate Summary

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)	TOL (70-130)	DCA (70-130)	DBFM (70-130)
620-1161-1	West-3 (4-8')_091521	102	98	109	107
620-1161-2	West-2 (4-8')_091521	102	98	111	109
620-1161-3	West-1 (4-8')_091521	96	94	119	107
620-1161-4	Center-3 (20-24')_091521	104	100	113	110
620-1161-5	Center-2 (20-24')_091521	104	99	113	110
620-1161-6	Center-1 (20-24')_091521	102	99	110	109
620-1161-7	East-3 (26-30')_091521	103	99	112	108
620-1161-8	East-2 (26-30')_091521	104	101	116	111
620-1161-9	East-1 (26-30')_091521	104	100	118	112
620-1161-10	Trip Blank	102	98	107	105
LCS 620-3983/1-A	Lab Control Sample	99	97	102	102
LCS 620-4037/1-A	Lab Control Sample	103	101	110	107
LCSD 620-3983/2-A	Lab Control Sample Dup	101	98	101	103
LCSD 620-4037/2-A	Lab Control Sample Dup	101	99	109	107
MB 620-3983/3-A	Method Blank	101	96	102	104
MB 620-4037/3-A	Method Blank	101	98	110	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

QC Sample Results

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 620-3983/3-A
Matrix: Solid
Analysis Batch: 3980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3983

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:19	1
Ethylbenzene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:19	1
Toluene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:19	1
m,p-Xylene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:19	1
o-Xylene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:19	1
Xylenes, Total	ND		15.0		ug/Kg		09/22/21 09:58	09/22/21 15:19	1
Naphthalene	ND		5.00		ug/Kg		09/22/21 09:58	09/22/21 15:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:19*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:19*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*	*09/22/21 09:58*	*09/22/21 15:19*	*1*

Lab Sample ID: LCS 620-3983/1-A
Matrix: Solid
Analysis Batch: 3980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3983

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.70		ug/Kg		99	70 - 130
Ethylbenzene	20.0	20.25		ug/Kg		101	70 - 130
Toluene	20.0	18.95		ug/Kg		95	70 - 130
m,p-Xylene	40.0	39.84		ug/Kg		100	70 - 130
o-Xylene	20.0	20.27		ug/Kg		101	70 - 130
Naphthalene	20.0	19.99		ug/Kg		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 620-3983/2-A
Matrix: Solid
Analysis Batch: 3980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3983

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	20.34		ug/Kg		102	70 - 130	3	30
Ethylbenzene	20.0	21.08		ug/Kg		105	70 - 130	4	30
Toluene	20.0	19.47		ug/Kg		97	70 - 130	3	30
m,p-Xylene	40.0	40.70		ug/Kg		102	70 - 130	2	30
o-Xylene	20.0	20.95		ug/Kg		105	70 - 130	3	30
Naphthalene	20.0	20.17		ug/Kg		101	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 620-3983/2-A
Matrix: Solid
Analysis Batch: 3980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3983

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 620-4037/3-A
Matrix: Solid
Analysis Batch: 4029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4037

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.00		ug/Kg		09/23/21 11:33	09/23/21 13:18	1
Ethylbenzene	ND		5.00		ug/Kg		09/23/21 11:33	09/23/21 13:18	1
Toluene	ND		5.00		ug/Kg		09/23/21 11:33	09/23/21 13:18	1
m,p-Xylene	ND		5.00		ug/Kg		09/23/21 11:33	09/23/21 13:18	1
o-Xylene	ND		5.00		ug/Kg		09/23/21 11:33	09/23/21 13:18	1
Xylenes, Total	ND		15.0		ug/Kg		09/23/21 11:33	09/23/21 13:18	1
Naphthalene	ND		5.00		ug/Kg		09/23/21 11:33	09/23/21 13:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:18*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:18*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*	*09/23/21 11:33*	*09/23/21 13:18*	*1*

Lab Sample ID: LCS 620-4037/1-A
Matrix: Solid
Analysis Batch: 4029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4037

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			20.0	21.65		ug/Kg		108	70 - 130		
Ethylbenzene			20.0	22.95		ug/Kg		115	70 - 130		
Toluene			20.0	21.07		ug/Kg		105	70 - 130		
m,p-Xylene			40.0	45.42		ug/Kg		114	70 - 130		
o-Xylene			20.0	22.65		ug/Kg		113	70 - 130		
Naphthalene			20.0	21.30		ug/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
Dibromofluoromethane (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 620-4037/2-A
Matrix: Solid
Analysis Batch: 4029

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4037

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			20.0	20.26		ug/Kg		101	70 - 130	7	30
Ethylbenzene			20.0	21.39		ug/Kg		107	70 - 130	7	30
Toluene			20.0	19.42		ug/Kg		97	70 - 130	8	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 620-4037/2-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 4029
Prep Batch: 4037

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m,p-Xylene			40.0	41.42		ug/Kg		104	70 - 130	9	30
o-Xylene			20.0	21.18		ug/Kg		106	70 - 130	7	30
Naphthalene			20.0	20.38		ug/Kg		102	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
Dibromofluoromethane (Surr)	*107*		*70 - 130*

Exhibit 1 Schedule 4A

QC Association Summary

GC/MS VOA

Pre Prep Batch: 3860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1161-1	West-3 (4-8')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-2	West-2 (4-8')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-3	West-1 (4-8')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-4	Center-3 (20-24')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-5	Center-2 (20-24')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-6	Center-1 (20-24')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-7	East-3 (26-30')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-8	East-2 (26-30')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-9	East-1 (26-30')_091521	Total/NA	Solid	Frozen Preserve	
620-1161-10	Trip Blank	Total/NA	Solid	Frozen Preserve	

Analysis Batch: 3980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1161-1	West-3 (4-8')_091521	Total/NA	Solid	8260C	3983
620-1161-2	West-2 (4-8')_091521	Total/NA	Solid	8260C	3983
620-1161-4	Center-3 (20-24')_091521	Total/NA	Solid	8260C	3983
620-1161-5	Center-2 (20-24')_091521	Total/NA	Solid	8260C	3983
620-1161-6	Center-1 (20-24')_091521	Total/NA	Solid	8260C	3983
620-1161-7	East-3 (26-30')_091521	Total/NA	Solid	8260C	3983
620-1161-8	East-2 (26-30')_091521	Total/NA	Solid	8260C	3983
620-1161-9	East-1 (26-30')_091521	Total/NA	Solid	8260C	3983
620-1161-10	Trip Blank	Total/NA	Solid	8260C	3983
MB 620-3983/3-A	Method Blank	Total/NA	Solid	8260C	3983
LCS 620-3983/1-A	Lab Control Sample	Total/NA	Solid	8260C	3983
LCSD 620-3983/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	3983

Prep Batch: 3983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1161-1	West-3 (4-8')_091521	Total/NA	Solid	5035	3860
620-1161-2	West-2 (4-8')_091521	Total/NA	Solid	5035	3860
620-1161-4	Center-3 (20-24')_091521	Total/NA	Solid	5035	3860
620-1161-5	Center-2 (20-24')_091521	Total/NA	Solid	5035	3860
620-1161-6	Center-1 (20-24')_091521	Total/NA	Solid	5035	3860
620-1161-7	East-3 (26-30')_091521	Total/NA	Solid	5035	3860
620-1161-8	East-2 (26-30')_091521	Total/NA	Solid	5035	3860
620-1161-9	East-1 (26-30')_091521	Total/NA	Solid	5035	3860
620-1161-10	Trip Blank	Total/NA	Solid	5035	3860
MB 620-3983/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-3983/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-3983/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 4029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1161-3	West-1 (4-8')_091521	Total/NA	Solid	8260C	4037

QC Association Summary

GC/MS VOA (Continued)

Analysis Batch: 4029 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 620-4037/3-A	Method Blank	Total/NA	Solid	8260C	4037
LCS 620-4037/1-A	Lab Control Sample	Total/NA	Solid	8260C	4037
LCSD 620-4037/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	4037

Prep Batch: 4037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1161-3	West-1 (4-8')_091521	Total/NA	Solid	5035	3860
MB 620-4037/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-4037/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-4037/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

General Chemistry

Analysis Batch: 3884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-1161-1	West-3 (4-8')_091521	Total/NA	Solid	Moisture	
620-1161-2	West-2 (4-8')_091521	Total/NA	Solid	Moisture	
620-1161-3	West-1 (4-8')_091521	Total/NA	Solid	Moisture	
620-1161-4	Center-3 (20-24')_091521	Total/NA	Solid	Moisture	
620-1161-5	Center-2 (20-24')_091521	Total/NA	Solid	Moisture	
620-1161-6	Center-1 (20-24')_091521	Total/NA	Solid	Moisture	
620-1161-7	East-3 (26-30')_091521	Total/NA	Solid	Moisture	
620-1161-8	East-2 (26-30')_091521	Total/NA	Solid	Moisture	
620-1161-9	East-1 (26-30')_091521	Total/NA	Solid	Moisture	

Lab Chronicle

Exhibit 1 Schedule 4A

Client: AECOM
Job ID: 620-1161-1
Project/Site: Unitil - Exeter, NH

Client Sample ID: West-3 (4-8')_091521
Lab Sample ID: 620-1161-1
Date Collected: 09/15/21 08:30
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: West-3 (4-8')_091521
Lab Sample ID: 620-1161-1
Date Collected: 09/15/21 08:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 16:38	DDP	ENE

Client Sample ID: West-2 (4-8')_091521
Lab Sample ID: 620-1161-2
Date Collected: 09/15/21 09:00
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: West-2 (4-8')_091521
Lab Sample ID: 620-1161-2
Date Collected: 09/15/21 09:00
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 17:05	DDP	ENE

Client Sample ID: West-1 (4-8')_091521
Lab Sample ID: 620-1161-3
Date Collected: 09/15/21 09:30
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: West-1 (4-8')_091521
Lab Sample ID: 620-1161-3
Date Collected: 09/15/21 09:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			4037	09/23/21 11:33	MED	ENE
Total/NA	Analysis	8260C		1	4029	09/23/21 13:44	DDP	ENE

Lab Chronicle

Client Sample ID: Center-3 (20-24')_091521
Lab Sample ID: 620-1161-4

Date Collected: 09/15/21 10:00
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: Center-3 (20-24')_091521
Lab Sample ID: 620-1161-4

Date Collected: 09/15/21 10:00
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 73.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 17:57	DDP	ENE

Client Sample ID: Center-2 (20-24')_091521
Lab Sample ID: 620-1161-5

Date Collected: 09/15/21 10:30
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: Center-2 (20-24')_091521
Lab Sample ID: 620-1161-5

Date Collected: 09/15/21 10:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 73.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 18:24	DDP	ENE

Client Sample ID: Center-1 (20-24')_091521
Lab Sample ID: 620-1161-6

Date Collected: 09/15/21 11:00
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: Center-1 (20-24')_091521
Lab Sample ID: 620-1161-6

Date Collected: 09/15/21 11:00
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 73.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 18:50	DDP	ENE

Lab Chronicle

Client Sample ID: East-3 (26-30')_091521

Lab Sample ID: 620-1161-7

Date Collected: 09/15/21 11:30
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: East-3 (26-30')_091521

Lab Sample ID: 620-1161-7

Date Collected: 09/15/21 11:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 68.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 19:17	DDP	ENE

Client Sample ID: East-2 (26-30')_091521

Lab Sample ID: 620-1161-8

Date Collected: 09/15/21 12:00
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: East-2 (26-30')_091521

Lab Sample ID: 620-1161-8

Date Collected: 09/15/21 12:00
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 69.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 19:43	DDP	ENE

Client Sample ID: East-1 (26-30')_091521

Lab Sample ID: 620-1161-9

Date Collected: 09/15/21 12:30
Matrix: Solid
Date Received: 09/16/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	3884	09/17/21 16:27	KFS	ENE

Client Sample ID: East-1 (26-30')_091521

Lab Sample ID: 620-1161-9

Date Collected: 09/15/21 12:30
Matrix: Solid
Date Received: 09/16/21 14:05
Percent Solids: 70.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 20:10	DDP	ENE

Lab Chronicle

Client Sample ID: Trip Blank

Lab Sample ID: 620-1161-10

Date Collected: 09/15/21 00:00
Date Received: 09/16/21 14:05

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Frozen Preserve			3860	09/16/21 16:42	PN	ENE
Total/NA	Prep	5035			3983	09/22/21 09:58	MED	ENE
Total/NA	Analysis	8260C		1	3980	09/22/21 15:46	DDP	ENE

Laboratory References:

ENE = Eurofins Environment Testing New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

Accreditation/Certification Summary

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Laboratory: Eurofins Environment Testing New England

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Hampshire	NELAP	2240	08-03-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Solids

Method Summary

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ENE
Moisture	Percent Moisture	EPA	ENE
5035	Closed System Purge and Trap	SW846	ENE
Frozen Preserve	Freezing Samples	None	ENE

Protocol References:

EPA = US Environmental Protection Agency
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ENE = Eurofins Environment Testing New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

Sample Summary

Exhibit 1 Schedule 4A

Client: AECOM
Project/Site: Unitil - Exeter, NH

Job ID: 620-1161-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
620-1161-1	West-3 (4-8')_091521	Solid	09/15/21 08:30	09/16/21 14:05
620-1161-2	West-2 (4-8')_091521	Solid	09/15/21 09:00	09/16/21 14:05
620-1161-3	West-1 (4-8')_091521	Solid	09/15/21 09:30	09/16/21 14:05
620-1161-4	Center-3 (20-24')_091521	Solid	09/15/21 10:00	09/16/21 14:05
620-1161-5	Center-2 (20-24')_091521	Solid	09/15/21 10:30	09/16/21 14:05
620-1161-6	Center-1 (20-24')_091521	Solid	09/15/21 11:00	09/16/21 14:05
620-1161-7	East-3 (26-30')_091521	Solid	09/15/21 11:30	09/16/21 14:05
620-1161-8	East-2 (26-30')_091521	Solid	09/15/21 12:00	09/16/21 14:05
620-1161-9	East-1 (26-30')_091521	Solid	09/15/21 12:30	09/16/21 14:05
620-1161-10	Trip Blank	Solid	09/15/21 00:00	09/16/21 14:05

1161 EM

eurofins | **Environment Testing New England**

CHAIN OF CUST

620-1161 Chain of Custody

Page 1 of 1

Special Handling:

☒ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed

Report To: 250 APOLLO DRIVE
CHELMSFORD MA
01824
AECOM

Telephone #: 978-905-2100

Project Mgr: MARK MCCABE

Invoice To: SAME

P O No.:

Quote #:

Project No.: 60536962.300

Site Name: EXETER NH - UNITIL GAS

Location: EXETER

State: NH

Sampler(s): C. CALLAHAN

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid

7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= NONE 12=

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= X2= X3=

G= Grab C=Composite

						Containers					**List Preservative Code below:**								
											7,9	11							
											Analysis								
Lab ID:	**Sample ID:**	**Date:**	**Time:**	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		BTEX	NAPHTHALENE							**Check if chlorinated**
-01	WEST-3 (4-8')_091521	9-15-21	0830	C	SO	3		1			X	X							☐
-02	WEST-2 (4-8')_091521	↓	0900	↓	↓	↓		↓			↓	↓							☐
-03	WEST-1 (4-8')_091521	↓	0930	↓	↓	↓		↓			↓	↓							☐
-04	CENTER-3 (20-24')_091521	↓	1000	↓	↓	↓		↓			↓	↓							☐
-05	CENTER-2 (20-24')_091521	↓	1030	↓	↓	↓		↓			↓	↓							☐
-06	CENTER-1 (20-24')_091521	↓	1100	↓	↓	↓		↓			↓	↓							☐
-07	EAST-3 (26-30')_091521	↓	1130	↓	↓	↓		↓			↓	↓							☐
-08	EAST-2 (26-30')_091521	↓	1200	↓	↓	↓		↓			↓	↓							☐
-09	EAST-1 (26-30')_091521	↓	1230	↓	↓	↓		↓			↓	↓							☐
-10	TRIP BLANK	LAB				3					↓	↓							☐

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☒ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other
State-specific reporting standards.

Relinquished by:	**Received by:**	**Date:**	**Time:**	**Temp °C**
		9/16/21	12:30	Observed 2.9
		9/16/21	14:05	Correction Factor +1
				Corrected 3.9
				IR ID # 6

☒ EDD format: AECOM EQUIS

☒ E-mail to COLIN.CALLAHAN@AECOM.COM
MARK.MCCABE@AECOM.COM

Condition upon receipt: **Custody Seals:** ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev Jan 2020

Page 29 of 30

0045

9/23/2021

Exhibit 1 Schedule A

Login Sample Receipt Checklist

Client: AECOM

Job Number: 620-1161-1

Login Number: 1161
List Number: 1
Creator: Makhoul, Elie

List Source: Eurofins Environment Testing New England

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

COMPANY NAME

NORTHERN UTILITIES, INC.

ROCHESTER FORMER MGP SITE

LINE
NO SCHEDULE 4B

1. SITE LOCATION: Route 125 and Spaulding Turnpike, Rochester, NH

2. DATE SITE WAS FIRST INVESTIGATED AS A DISPOSAL SITE:
The property owner of record reported environmental concerns in 1989.

3. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES (July 1, 2021 – June 30, 2022):

- Northern directed AECOM to continue providing environmental consulting services, including remediation design support and groundwater monitoring, for the former manufactured gas plant (MGP). AECOM conducted two sampling events and submitted an annual report to the New Hampshire Department of Environmental Services (NH DES) for review during the reporting period, which summarized the status of groundwater quality monitoring.

- As required by the Rochester Water and Sewer Department, Northern conducted an annual inspection of the Site's backflow prevention device during the reporting time period. Furthermore, domestic water to the Site needed to be shut-off/turned-on because of the absence of a heated structure to prevent over-winter freezing.

- The NH DES directed Northern to further investigate/delineate on-Site source materials for future remediation, as part of a separately-proposed regulator station installation. This investigation/delineation occurred alongside the station installation to minimize impact to the Site's soil and groundwater. Northern directed AECOM to submit the on-Site source materials investigation report in January 2022 (See Exhibit 1, Schedule 4B).

- Northern directed AECOM to coordinate with Northern's New Hampshire Gas Operations, which installed a second, gas regulator station at the Site to ensure local gas supply reliability. Construction on the station was completed in October 2021. Although the station installation impacted portions of the Site, these activities were separate of the phytoremediation project. Northern directed AECOM to submit a summary report on soil management conducted during regulator station installation, which included minor impacts to the area covered by the GMP (See Exhibit 2, Schedule 4B).

- Northern directed AECOM to prepare a remedial action plan (RAP) focused on the on-Site source materials to the NH DES. Furthermore, Northern directed AECOM to conduct an evaluation of the phytoremediation project's effectiveness of influencing on-Site groundwater flows. The NH DES directed Northern to conduct these activities in June 2022 (See Exhibit 3, Schedule 4B). Northern anticipates completion of these activities by the first half of 2023.

4. NEW HAMPSHIRE SITE REMEDIATION PROGRAM PHASE:

The Rochester former Manufactured Gas Plant continues to implement the remediation design and monitor its progress via the groundwater monitoring program overseen by the NH DES.

5. NATURE AND SCOPE OF SITE CONTAMINATION:

Areas containing residual materials from the historic operation and decommissioning of the former MGP were discovered on the two-acre parcel. These residuals, which include coal tars and oils, were found in the soil at discrete locations and in the underlying groundwater. The remediation design focused on removing the affected soils to the extent practicable and enhancing the natural attenuation of any residuals in groundwater.

In addition, the remediation design included the removal of a tar well, which had been previously inaccessible because of propane storage equipment, the purchase of a former parcel from AmeriGas to facilitate the placement of notices of Activity and Use Restrictions (AURs) on the deeds, the demolition of an historic structure, the implementation of a multiphase phytoremediation program to mitigate contaminated groundwater flow, and a further assessment of the residuals through a groundwater monitoring program.

6. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP OF SITE:

The Rochester Gas Light Company owned and operated the former gas works from 1906 through 1911. The gas works was subsequently owned and operated by two, separate companies after the Rochester Gas Light Company – Strafford-York Gas Company in 1911 and Allied New Hampshire Gas Company in 1942. The plant ceased operating in 1957. Allied New Hampshire Gas Company was a predecessor of Northern.

However, Northern sold the property to Pyrofax Gas Corporation in 1971. Pyrofax sold the property to Petrolane Gas Service, LP in 1987. AmeriGas purchased Petrolane in 1994. The property was purchased by Northern from AmeriGas in 2004 as part of a settlement agreement. Northern also purchased the eastern portion of the site from Mr. Peter Field in 1990. This portion of the site is undeveloped and contains remnants of a railroad bed. Northern also owns land adjacent to the former gas works.

7. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS:

NAME OF SUIT: Field vs. Petrolane and Northern Utilities, and Petrolane vs. Northern Utilities

DATE FILED: 1988

STATUS (PENDING/SETTLED): Settled 1994

29 Hazen Drive; PO Box 95
Concord, NH 03302-0095

SOURCE MATERIAL INVESTIGATION REPORT
Petrolane/Northern Utilities, Inc. Site
Route 125
Rochester, NH 03867

NHDES Site #: 198712002
Project Type: Hazardous Waste Project
Project Number: 0432

Prepared For:
Unitil Service Corp.
6 Liberty Lane W
Hampton, NH 03842-1720
Phone Number (603) 379-3829
RP Contact Name: Thomas Murphy
RP Contact Email: murphyt@unitil.com

JOSHUA
C.
MILLARD
No. 812

Digitally signed by Millard, Joshua
DN: cn=Millard, Joshua, c=US,
o=AECOM, ou=USCHL1,
email=joshua.millard@aecom.com
Date: 2022.01.21 17:03:58 -05'00'

Prepared By:
AECOM
250 Apollo Drive.
Chelmsford, MA 01824
Phone Number: (978) 905-2100
Contact Name: Ryan McCarthy
Contact Email: ryan.mccarthy@aecom.com

Date of Report: January 21, 2022

Source Material Investigation Report

Petrolane/Northern Utilities, Inc. Site
Route 125
Rochester, NH 03867

Unitil Service Corp.

Project number: 60139732

January 2022

Quality information

Prepared by	Reviewed by	Approved by
	Joshua C. Millard	
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Table of Contents

Appendices

Tables

Figures

1. Introduction

The former Rochester Manufactured Gas Plant (MGP) site (Site) is located at the intersection of Route 125 and the Spaulding Turnpike in Rochester, New Hampshire. The Site is bounded by Axe Handle Brook to the north, the Cocheco River to the east, and roadways on the west and south (Figure 1-1). The MGP facility operated in the western portion of the Site from 1903 through 1957.

A Source Removal Action was conducted at the Site during the period of September 1999 to December 1999. The source removal activities focused on those areas of the Site where there was evidence of source material within the practical depth of excavation, i.e. two feet below the depth of the water table (Figure 1-2). During the program, 19,500 tons of impacted soil was excavated from the Site (RETEC, 2001). The program was designed to address approximately 95% of the source material identified in the Phase II Site Investigation Report (HLA, 1999).

An additional source removal action was conducted in the Former Tar Well Area (Figure 1-2) during the period of January to April 2004 to address source material that had previously been inaccessible due to the presence of infrastructure for the propane distribution system. As in the previous source removal action, the practical depth of excavation was established to be two feet below the water table. During the program, the top of the tar well was uncovered and investigated. The circular structure was measured with a diameter of 19 feet and a depth of 7 feet (10 ft. bgs). The contents of the structure (i.e., approximately 386 tons of impacted soil, 7,303 gallons of benzene-impacted wastewater, 9,439 gallons of emulsion, and approximately 14 tons of coal tar and debris) were removed and managed off-Site at permitted facilities. Subsequently, the walls of the structure were cleaned, the structure was closed using flowable fill, and the excavation was backfilled (RETEC, 2004a). On December 22, 2004, NHDES issued a Certificate of Completion for the remedial actions implemented at the Site.

The Groundwater Management Permit (GWP) for the Site was renewed by the New Hampshire Department of Environmental Services (NHDES) on July 2, 2018 (GWP-198712002-R-006). Under the current GWP, water quality monitoring events are performed in November of each year, and biennial Groundwater Quality Summary Reports are submitted in January of every even numbered year.

In July of 2018, the NHDES requested that Unitil review the results from the groundwater monitoring program and evaluate options for improving the degradation rate of MGP constituents. Unitil's review demonstrated the following:

- The concentrations of the principal MGP constituents were stable, but at a level that is greater than NHDES criteria for site closure;
- The dissolved-phase concentrations at the Site would not affect the ambient water quality of the Cocheco River; and
- There is no risk from the current and future use of the Site.

This report summarizes the findings from an investigation designed to identify the source of the remaining dissolved-phase impacts as an initial step in evaluating future remedial actions. It is organized as follows: Section 2 summarizes the source area investigation activities completed; Section 3 presents a discussion of the results from the investigation; Section 4 presents conclusions from the investigation and recommendation for future remedial activities; and Section 5 lists the references used in the preparation of this document. The appendices present the boring logs and analytical reports from the investigation.

2. Source Area Delineation Activities

The purpose of the field investigation was to identify the remaining source area for MGP impacts that are likely to affect groundwater quality. The selection of the sampling locations was based on the following criteria:

- Areas that are topographically and hydraulically downgradient of previously identified source areas; and
- Areas that are accessible, i.e., areas that can be reached using a pathway through the existing tree stands for a direct push technology (DPT) rig, and where sampling would not be impeded by the former railroad abutment.

The following discussion provides a summary of the sampling and analytical activities conducted as part of the investigation of the source area.

2.1 Field Sampling and Analysis

The investigation was conducted in two distinct efforts; one effort from June 22 to July 2, 2020 to collect soil samples from thirteen (13) investigation locations (GP-701 through GP-713) across four transects (A, B, C, & D), and one effort from December 3 to December 4, 2020 to collect soil samples from eight (8) investigation locations (GP-901 through GP-908) to further delineate impacts along the Axe Handle Brook as shown on Figure 2-1.

2.1.1 Soil Sampling

Prior to ground break, the investigation area was defined, and the utility lines were marked. Soil borings were then installed at each of the locations to a maximum depth of 30 feet below ground surface (ft. bgs) using a track mounted DPT rig. Soil boring logs are included in Appendix A. They were prepared to document depths, physical characteristics, and visual/olfactory observations during soil boring installation.

As borings were advanced, soil cores from the DPT rig were screened for the presence of volatile organics using a photoionization detector (PID) following head space screening procedures, and the soils were described for content and the presence of visual and/or olfactory impacts. Samples were collected from the two foot interval where the highest PID readings were observed, and/or the two foot interval with the most visibly impacted soils. If no impacts were observed, samples were collected from the saturated zone at an interval consistent with where tar/residuals were observed elsewhere on the Site.

After boring installation, logging, and sample collection, the open boreholes were filled with the soil cuttings in the order they came out to approximate their original vertical location in the borehole. All soil sampling equipment was decontaminated between borings and following completion of the work. Soil boring location coordinates were collected using a hand-held GPS receiver.

2.1.2 Sample Management

All analytical samples were collected using the appropriate container and preservative specified by the selected analytical laboratory. Sample handling, packaging, chain-of-custody procedures, and shipping were performed in accordance with the procedures as presented below.

Analytical samples were designated using the sample source location or an acronym of the sample type, followed by the depth interval from which the sample was collected, followed by the date in which the sample was collected. For example, a soil sample collected at a depth of 8-10 ft bgs from Geoprobe soil boring GP-106 on July 15, 2020, would be designated GP-106(8-10)071520.

All samples were securely packed in the shipping container to protect the sample containers from breakage. Ice was included in the shipping container to maintain a sample temperature at or below 4°C.

All analytical samples were logged on a chain-of-custody form, which was enclosed in the sample shipping container along with the appropriate analytical samples. The chain-of-custody form designated any transfer of custody of the sample shipping container and the laboratory courier method of shipment.

2.2 Sample Analysis

The collected samples were analyzed by Eurofins USA, a Unitil–approved contract laboratory, for benzene and naphthalene analysis via Method SW-846 8260b. These constituents are traditionally associated with residual material from MGP processes, and they were chosen to identify potential source areas that may affect groundwater quality. Copies of the analytical reports are provided in Appendix B.

Additionally, impacted soils were collected in 5-gallon buckets in anticipation of delivery to a Unitil–approved contract laboratory for treatability testing for in-situ chemical oxidation. These soils will be analyzed at a later date as agreed upon by Unitil.

3. Presentation and Discussion of Results

Field observations from the two sampling events and the results from the analysis of soil samples are summarized in Table 3-1. As indicated, oil like material (OLM), indicative of non-aqueous phase liquid (NAPL) from the MGP process, was observed in the saturated zone at the majority of locations. Associated concentrations of naphthalene in soil samples ranged from 0.008 milligrams per kilograms (mg/Kg) to 1,700 mg/Kg. Benzene was not detected above the laboratories respective reporting limit at any location. The following discussion relates to the delineation of the remaining source area, as well as defining the principal source material believed to be responsible for the current levels of constituent concentrations in groundwater.

3.1 Source Area

Figure 3-1 illustrates the locations where NAPL and/or elevated concentrations of the selected MGP constituents were observed. Note that the figure illustrates the presence of NAPL/elevated constituent levels regardless of their depth. As illustrated, impacts were observed in the saturated zone at locations beneath the prior excavation area and in adjacent areas that extend to the edge of Axe Handle Brook and the Cocheco River. A review of the prior site documents provides some context for these observations:

- Prior excavation area - The Remedial Action Plan for the 2000 remediation project (ReTec, 1999) anticipated that residual impacts in the lower depths of the saturated zone would remain in place after the remediation. It was believed that, since these impacts comprised less than 5 percent of the total source material, the significant cost of additional dewatering to support their excavation was not warranted.
- Areas extending to Axe Handling Brook and the Cocheco River – A review of the Remedial Investigation Report (HLA, 1999) demonstrates that samples were not collected from these areas, likely due to the steep slopes that existed on the heavily wooded embankments.

Additional detail for the observed NAPL impacts is provided in the cross-sections A-A’ through G-G’ (Figures 3-2 and 3-2a through 3-2g). Note that the illustrations for GP-701 do not include the impact observations for elevations below 11.4 ft. since a review of the boring log suggests that they likely are an artifact of sampling. NAPL was observed in the bottom 2.4 feet of a distinct gravel layer on top of a confining clay layer that extended from 11.4 ft bgs to the end of the boring at 30 ft bgs. Observations of NAPL in loose sand from 15-20 ft bgs and from 25-30 ft bgs are believed to be the result of slough materials accumulating in the bore hole prior to advancing the Macrocore through those intervals. The effect is evidenced by the notation of “smearing “of OLM along the outside of the clay in the boring log, with no indication of impact within the matrix itself.

As illustrated, the most significant quantities of NAPL were observed beneath the prior excavation area at locations GP-712 (3.3 ft. thickness) in a silt/sand layer and GP-708 (9.9 feet thickness)/ GP-709 (6.8 feet thickness) in a lower gravel layer. The frequency and thickness of impacts are observed to decrease at locations towards Axe Handle Brook and the Cocheco River. Generally, impacts were observed at deepening intervals with distance from the prior excavation area.

The NAPL appears to be generally present in a residual state, i.e., not mobile in the environment. Although NAPL was observed on the bedrock surface at two locations, GP-901 (0.8 feet thickness) and GP-902 (2.5 feet thickness), the surface appears to slope inward toward the Site, i.e. away from Axe Handle Brook, with no other observation of NAPL on the bedrock surface. There have not been any observations of NAPL in Site monitoring wells, or sheen on the Cocheco River/ Axe Handle Brook.

3.2 Source Material

The results for the most significant impacts, i.e. NAPL thickness > 1 foot and/or naphthalene concentration > 100 mg/Kg, are illustrated by depth in Figures 3-3a through 3-3d. the principal findings include the following:

- 175-170 feet MSL (Mean Sea Level) (Figure 3-3a) - Impacts were observed at three locations with NAPL thickness from 1.4 to 2.1 feet. Two samples were analyzed for naphthalene in this horizon with concentrations from 118 to 650 mg/Kg.
- 170-165 feet MSL (Figure 3-3b) - Impacts were observed at seven locations with NAPL thicknesses from 2.5 to 5 feet. Six samples were analyzed for naphthalene in this horizon with concentrations from 272 to 1,500 mg/Kg.
- 165 -160 feet MSL (Figure 3-3c) - Impacts were observed at five locations with NAPL thicknesses from 1-4.6 feet. Five samples were analyzed for naphthalene in this horizon with concentrations from 163 to 1,700 mg/Kg.
- 160 -155 feet MSL (Figure 3-3d) - Impacts were observed at two locations. NAPL was observed at a single location beneath the prior remediation area at a thickness of 1 foot. Naphthalene was detected at this location downgradient of the prior excavation area at a concentration of 200 mg/Kg.
- Locations B-2 (NAPL 168–162 feet MSL) and B-3 (NAPL 169-153 feet MSL)
- Locations MW403D (NAPL 165 -155 feet MSL)

These significant impacts provide the most likely source of dissolved-phase impacts. As illustrated in Figures 3-3b and 3-3c, the greatest concentration of source material is located beneath the former excavation area at elevations of 170 to 160 feet MSL. NAPL at two locations (GP-708 and GP-709) in this area were observed throughout the 170-165 foot intervals at both borings. The average naphthalene concentrations at these locations was > 1,000 mg/Kg. Limited impacts were observed in this area at 160-155 feet MSL (GP-702), as illustrated in Figure 3-3d.

4. Conclusions and Recommendations

The results from the investigation indicate that the remaining MGP impacts are largely associated with media located below the practical depth of excavation of the prior remediation area. The results from the current investigation were combined with Phase II data from the area beneath the prior excavation area to better delineate the extent of these impacts (Figure 4-1). As illustrated, these impacts are located within an 11,000 square foot area at elevations of 170 to 160 ft MSL. (approximately 12 to 22 ft bgs). The location of these impacts is proximate to MW-03S and MW04S and is consistent with their screen intervals. These findings suggest that the remaining impacts beneath the prior excavation area are the principal source material affecting ground water quality at these locations.

The review of the results presented in the Phase II Report indicate that there are additional areas of source material that are proximate to MW-02D and MW-03S that are likely contributing to the current levels of dissolved-phase impact at these locations:

- MW-02D – Locations B-2 (NAPL 168–162 feet MSL) and B-3 (NAPL 169-153 feet MSL)
- MW-03S – Locations MW403D (NAPL 165 -155 feet MSL)

The findings from the program are appropriate to provide the following recommendations:

- The bulk samples of impacted media that were collected form highly impacted locations during the investigation should be used to conduct treatability testing.
- The results from the treatability testing should be used to support the development of a Remedial Action Plan (RAP) that evaluates appropriate remedies to address the remaining source material. Principal options should include excavation, solidification and chemical oxidation. In developing the RAP, Unitil will consider the following:
    - The prior remedial action was appropriate to address the potential exposure pathways at the Site. There is no risk from the exposure to MGP impacts in soil; groundwater is not used and has been proven to not impact surface water quality.
    - The nature of impacts at former MGP sites and applicable remedial actions can provide for improving groundwater conditions, but rarely achieve standards that are consistent with ambient water quality standards. Institutional controls are routinely required to support site closure.

  As a result, the RAP will identify a remedy that will achieve a reasonable balance between remedial cost and environmental benefit.

5. References

HLA, 1999. Phase II and IIA Site Investigation Report, Former Rochester MGP Site, Rochester, New Hampshire. February 1999.

RETEC, 2001. Completion Report, Former Manufactured Gas Plant, Source Removal Action, Rochester, New Hampshire. April 2001.

RETEC, 2004a. Completion Report Addendum Source Removal Action, Former Manufactured Gas Plant, Rochester, New Hampshire. June 2004.

AECOM, 2019. 2018 and 2019 Biennial Water Quality Report and November 2019 Water Monitoring Data Submittal, Petrolane/Northern Utilities, Inc. site, Route 125, Rochester NH. January 2020.

Table

Table 3-1
Source Material Investigation
Results Summary

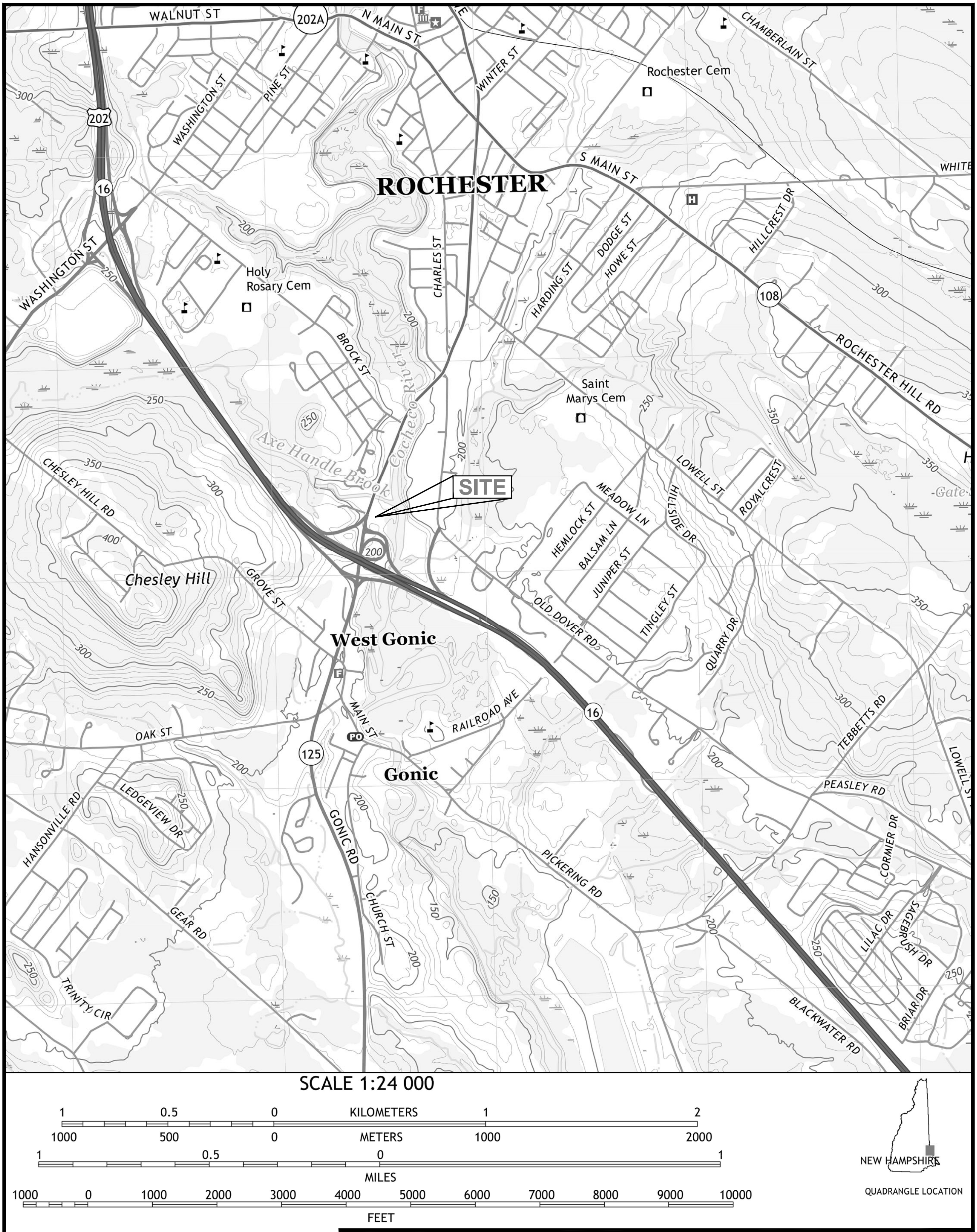
Location/ Surface Elevation (ft.) [1]	Boring Interval (ft. bgs)	OLM Thickness (ft.)	Constituent Concentration (mg/Kg)		
			Sampling Interval (ft.)	Naphthalene	Benzene
GP-701 (184 ft)	5-10	9-9.8	---	---	---
		---	9-11	650	<31
	10-15	10-11.4	---	---	---
	15-20	*15-20*	---	---	---
	20-25	*20-22*	---	---	---
	25-30	*25-28.7*	---	---	---
GP-702 (177 ft.)	5-10	8.3-9.4	---	---	---
	10-15	---	10-12	38	<1.8
	15-20	---	16-18	2.1	<0.05
GP-703 (178 ft.)	20-25	---	22-24	200	<8.5
GP-704 (179 ft.)	25-30	---	25.2-27.2	0.008	<0.003
GP-705 (185 ft.)	20-25	---	20-22	91	<3.1
GP-706 (186 ft.)	20-25	---	21.5-23.5	1,700	<41
GP-707 (182.5 ft.)	25-30	---	26.8-28.8	0.08	<0.003
GP-708 (180 ft.)	5-10	8.8-9.1	---	---	---
	10-15	11.1-13.9	11.9-13.9	1,500	<41
	15-20	15-15.9	---	---	---
		16.4-19.6	---	---	---
	20-24.5	20-20.5	---	---	---
		21.7-23.1	21.7-23.7	1,600	<36
GP-709 (186.5 ft.)	15-20	16.5-17.8	---	---	---
	20-25	20-21	---	---	---
		---	20-22	540	<1.8
		21.5-23.3	---	---	---
		---	22-24	670	<2.1
	25-30	25-26.2	---	---	---
GP-710 (182.5 ft.)	10-15	10-12.1	---	---	---
	20-25	20-23.2	20-22	750	<19
GP-711 (178 ft.)	10-15	10-11.1	10-12	60	<2.1
GP-712 (186 ft.)	10-15	12.2-12.7	---	---	---
	15-20	15-18.3	---	---	---
	20-25	---	20-22	1,100	<37
GP-713 (190.5 ft.)	15-20	16.3-17.7	16-18	4	<0.8
GP-901 (180 ft.)	5-10	5-5.8	4-6	21.4	<0.8
GP-902 (180 ft.)	10-15	10-12.5	10-12	316	<0.7
GP-903 (178 ft.)	5-10	6.1-7.9	6.5-8.5	351	<0.9
GP-904 (176.5)	5-10	9-9.5	---	---	---
		---	9-11	272	<0.9
	10-15	10-10.8	---	---	---
GP-905 (177 ft.)	5-10	---	5-7	118	<2.26
GP-906 (185 ft.)	15-20	17-17.7	16-18	64.4	<0.9
GP-907 (184 ft.)	20-25	22-23	21.5-23.5	164	<0.9
GP-908 (183 ft.)	15-20	18.3-18.6	17-19	364	<0.7
	20-25	20.6-20.9	---	---	---

Notes:

1	Surface Elevation (MSL)
Itlalics	OLM observations believed to be a sampling artifact
▨	OLM thickness greater than one foot
---	No OLM Observed or No Sample Collected

Figures

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\Site Locus\Fig 1-1 - Site Locus.dwg Layout: Fig 1-1 - Site Locus User: BarryK Plotted: Apr 01, 2021 - 1:06pm



AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 04/01/21 DRWN: K.P.B.

SITE LOCUS

FIGURE 1-1

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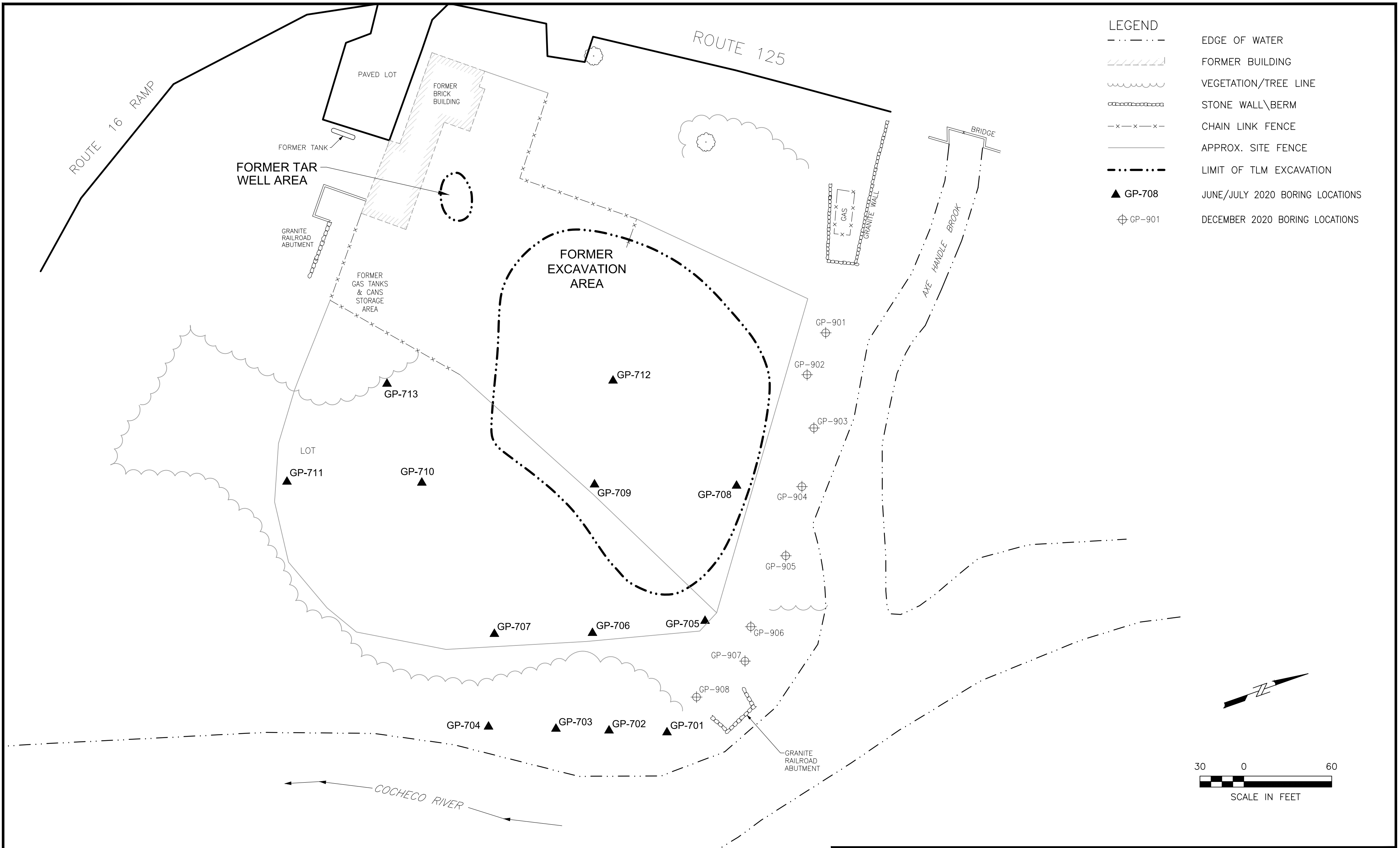


AECOM

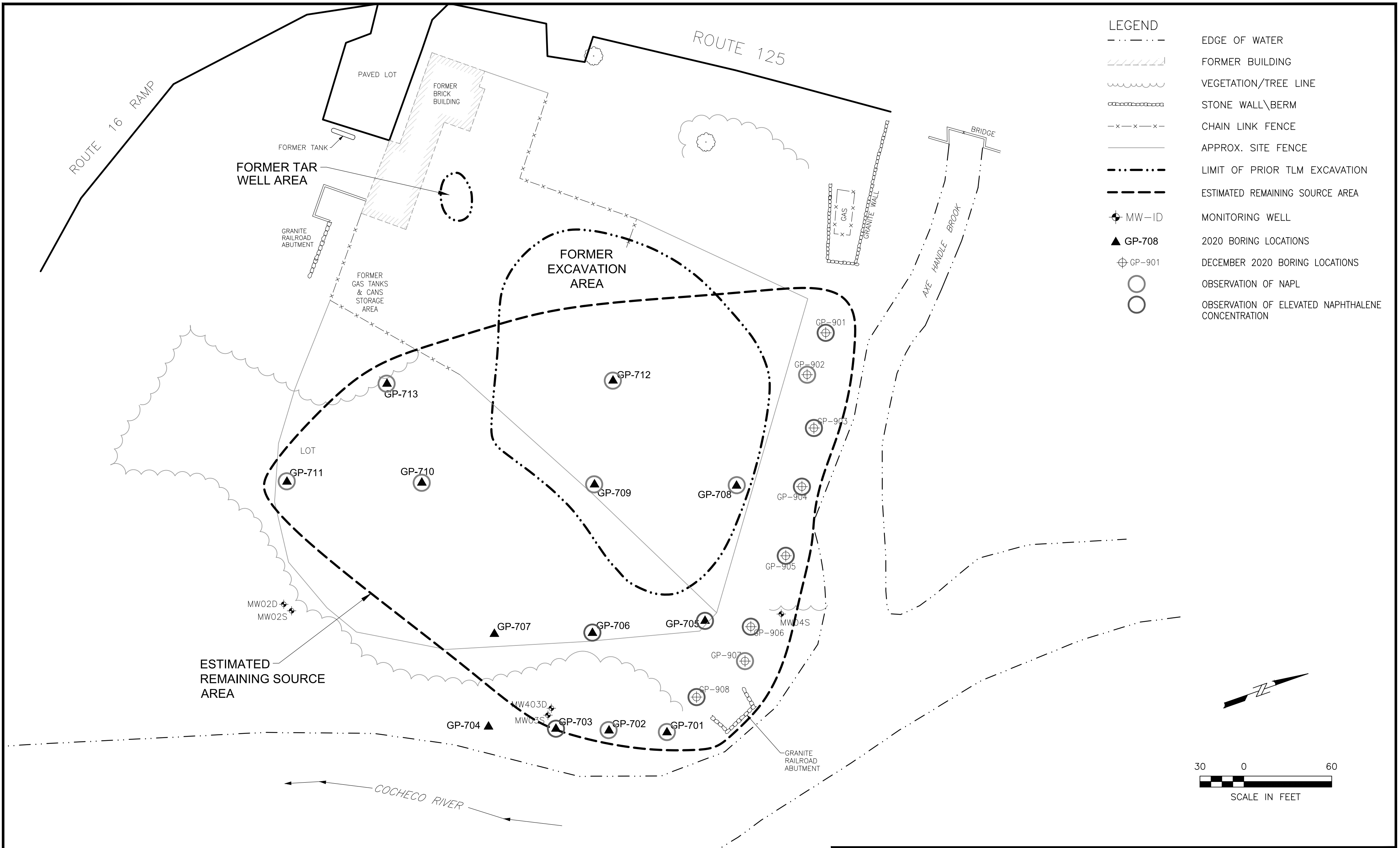
NORTHERN UTILITIES
PETROLANE SITE
60139732

SAMPLE LOCATIONS

ROCHESTER, NEW HAMPSHIRE

DATE: 04/01/21 DRWN: K.P.B.

FIGURE 2-1

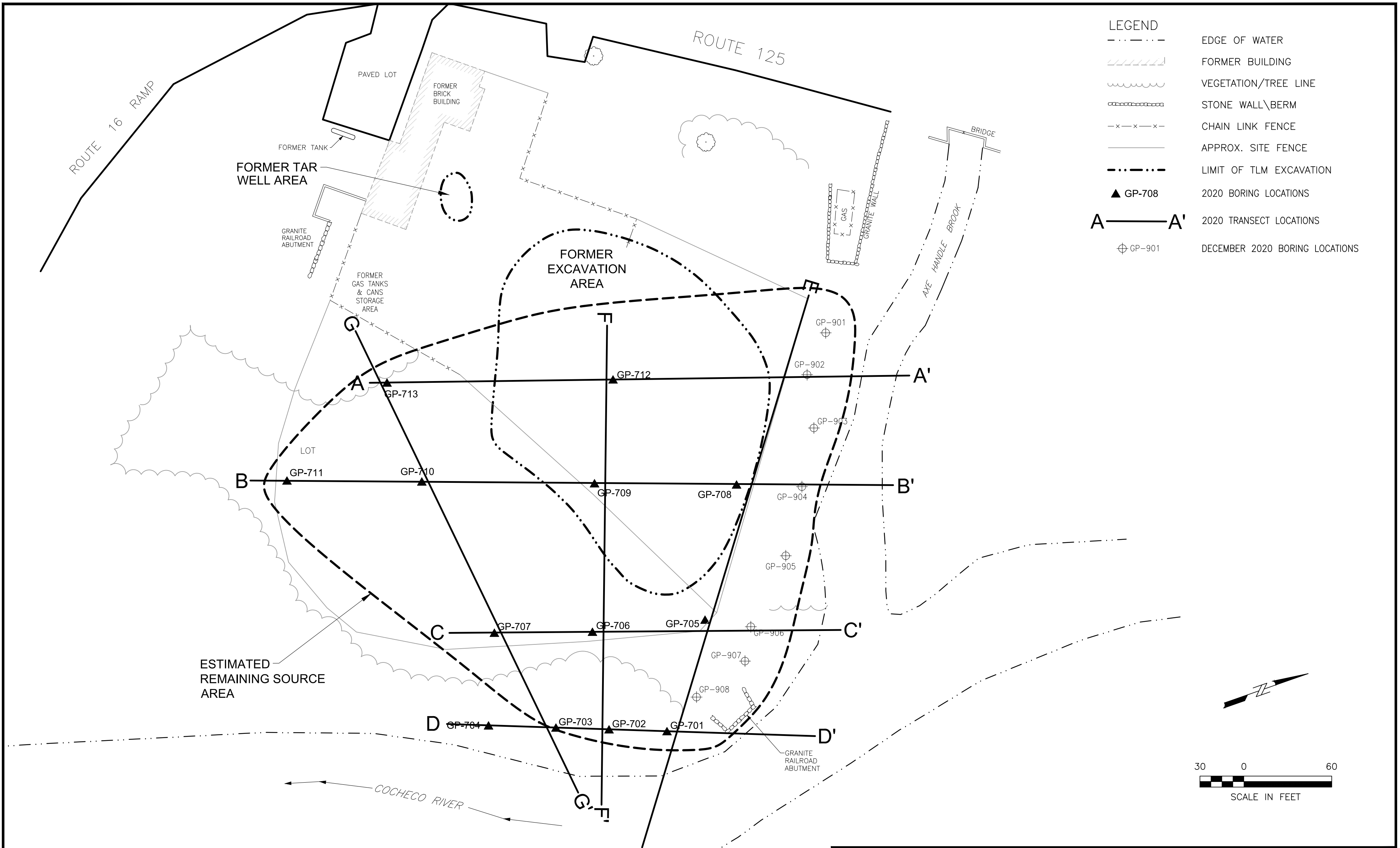


AECOM

NORTHERN UTILITIES PETROLANE SITE 60139732	**POTENTIAL SOURCE AREA** **ROCHESTER, NEW HAMPSHIRE**
DATE: 03/26/21 DRWN: K.P.B.	**FIGURE 3-1**

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-1 User: BarryK Plotted: Mar 26, 2021 - 12:24pm Xref's:

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-2 - Transect Locs User: BarryK Plotted: Apr 01, 2021 - 10:38am Xref



AECOM

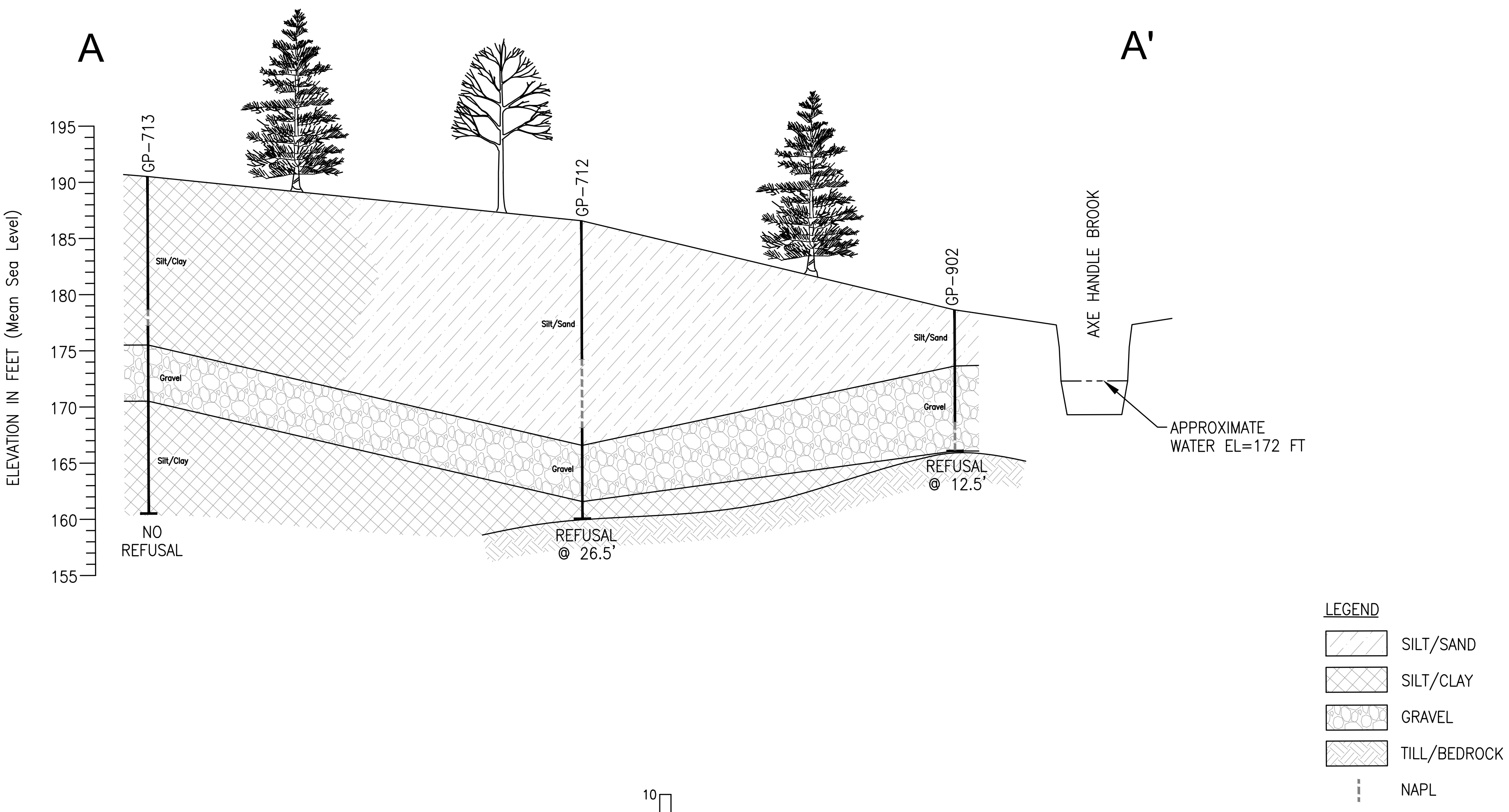
NORTHERN UTILITIES
PETROLANE SITE
60139732

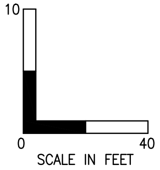
DATE: 04/01/21 DRWN: K.P.B.

TRANSECT LOCATIONS

ROCHESTER, NEW HAMPSHIRE

FIGURE 3-2





AECOM

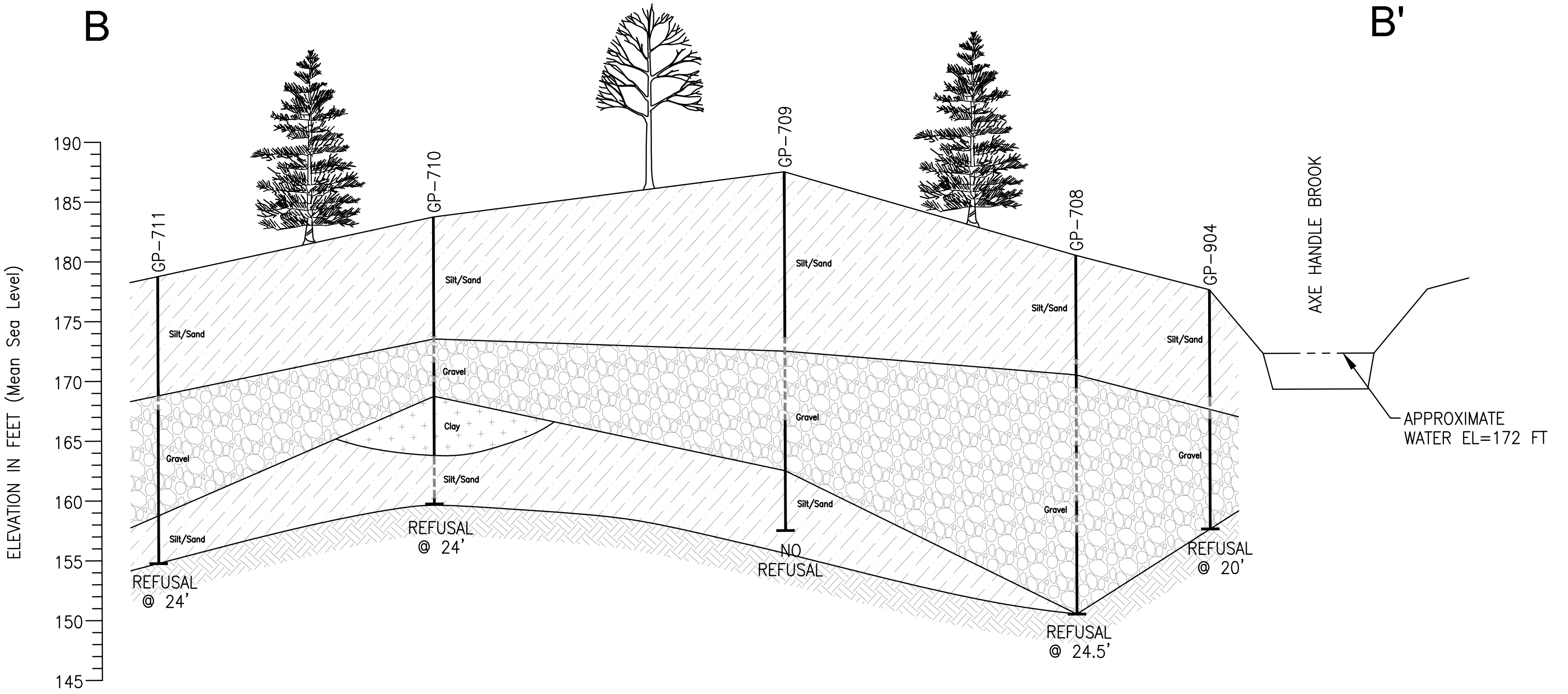
NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 03/26/21
DRWN: K.P.B.

CROSS SECTION A-A'

ROCHESTER, NEW HAMPSHIRE

FIGURE 3-2a



LEGEND

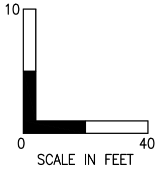
▨ SILT/SAND

▨ CLAY

▨ GRAVEL

▨ TILL/BEDROCK

┆ NAPL



AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 03/26/21 DRWN: K.P.B.

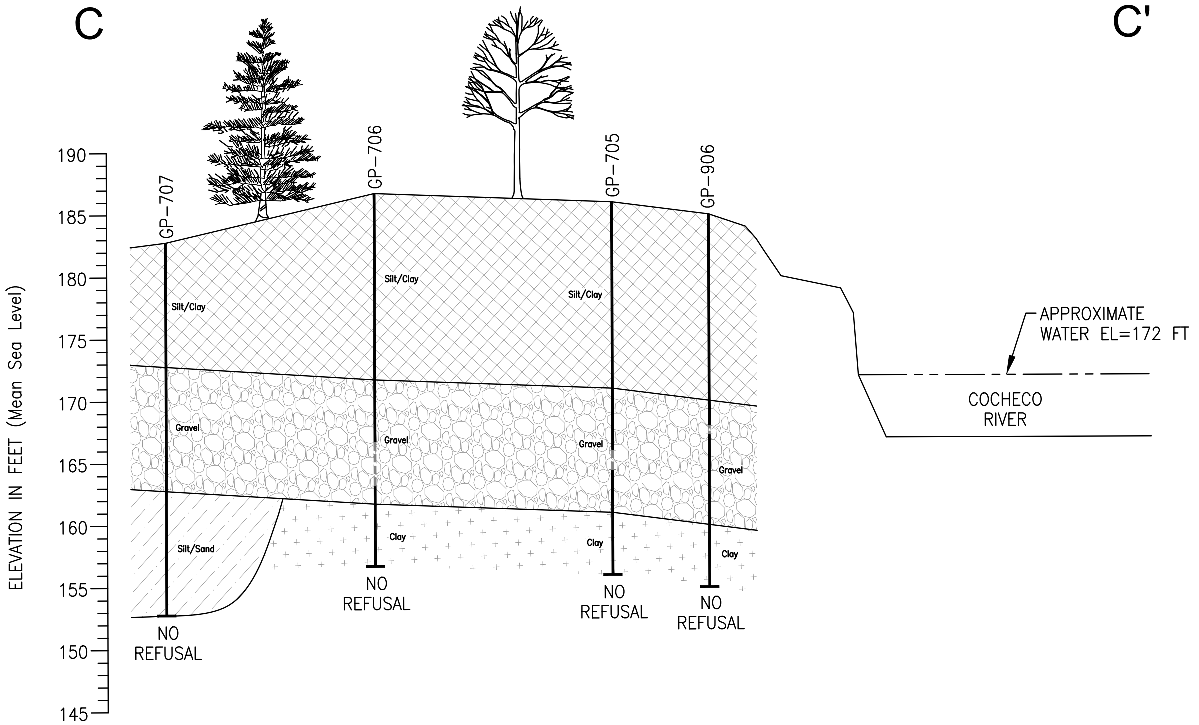
CROSS SECTION B-B'

ROCHESTER, NEW HAMPSHIRE

FIGURE 3-2b

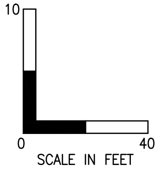
File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-2b - X-Sect B-B User: BarryK Plotted: Oct 26, 2021 - 2:37pm Xref's

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-2c - X-Sect C-C User: BarryK Plotted: Oct 26, 2021 - 2:39pm Xref's



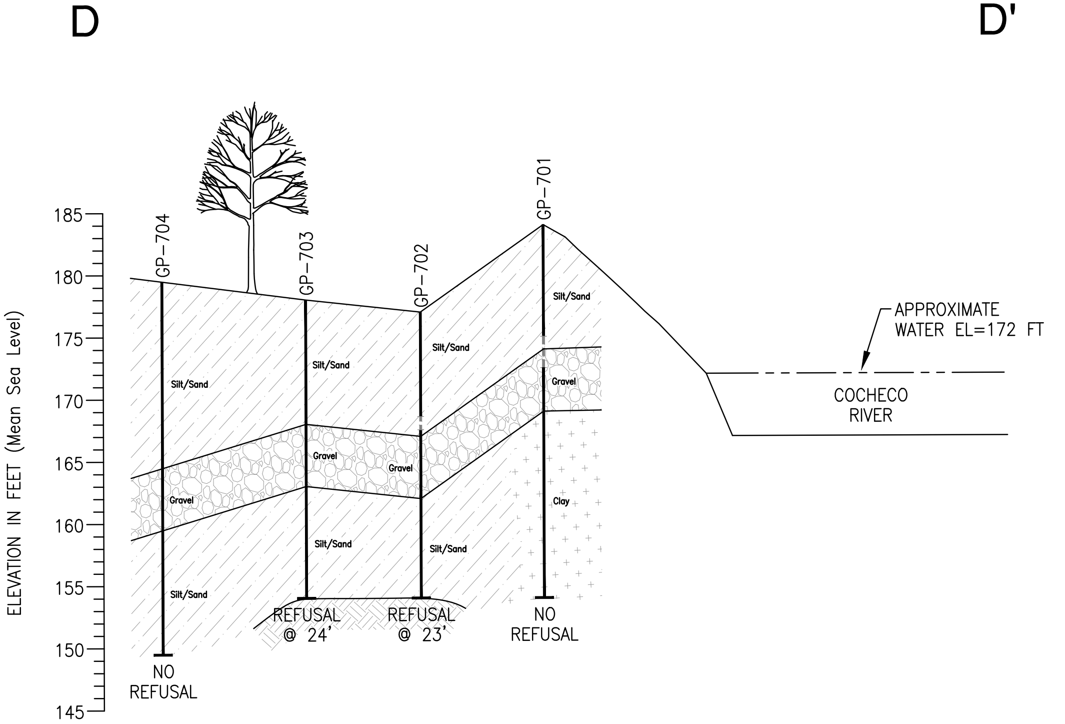
LEGEND

- ▨ SILT/CLAY
- ▨ SILT/SAND
- ▨ CLAY
- ▨ GRAVEL
- ┆ NAPL



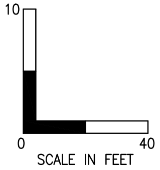
AECOM

NORTHERN UTILITIES PETROLANE SITE 60139732	**CROSS SECTION C-C'** **ROCHESTER, NEW HAMPSHIRE**
DATE: 03/26/21 DRWN: K.P.B.	**FIGURE 3-2c**



LEGEND

- ▨ SILT/SAND
- ⁜ CLAY
- ▩ GRAVEL
- ▧ TILL/BEDROCK
- ┆ NAPL



AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

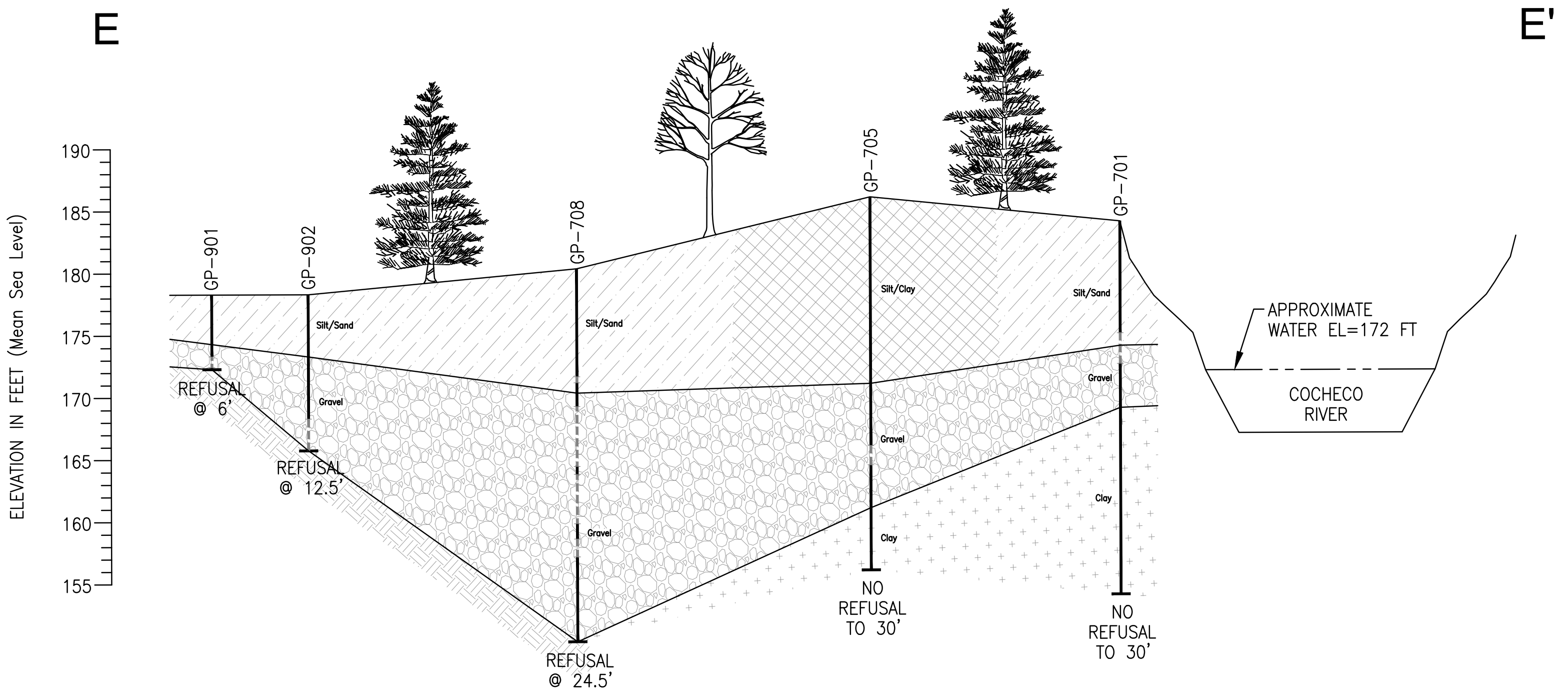
DATE: 03/26/21 DRWN: K.P.B.

CROSS SECTION D-D'

ROCHESTER, NEW HAMPSHIRE

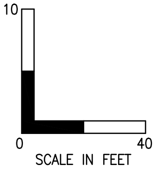
FIGURE 3-2d

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-2d - X-Sect D-D User: BarryK Plotted: Oct 26, 2021 - 2:41pm Xref's



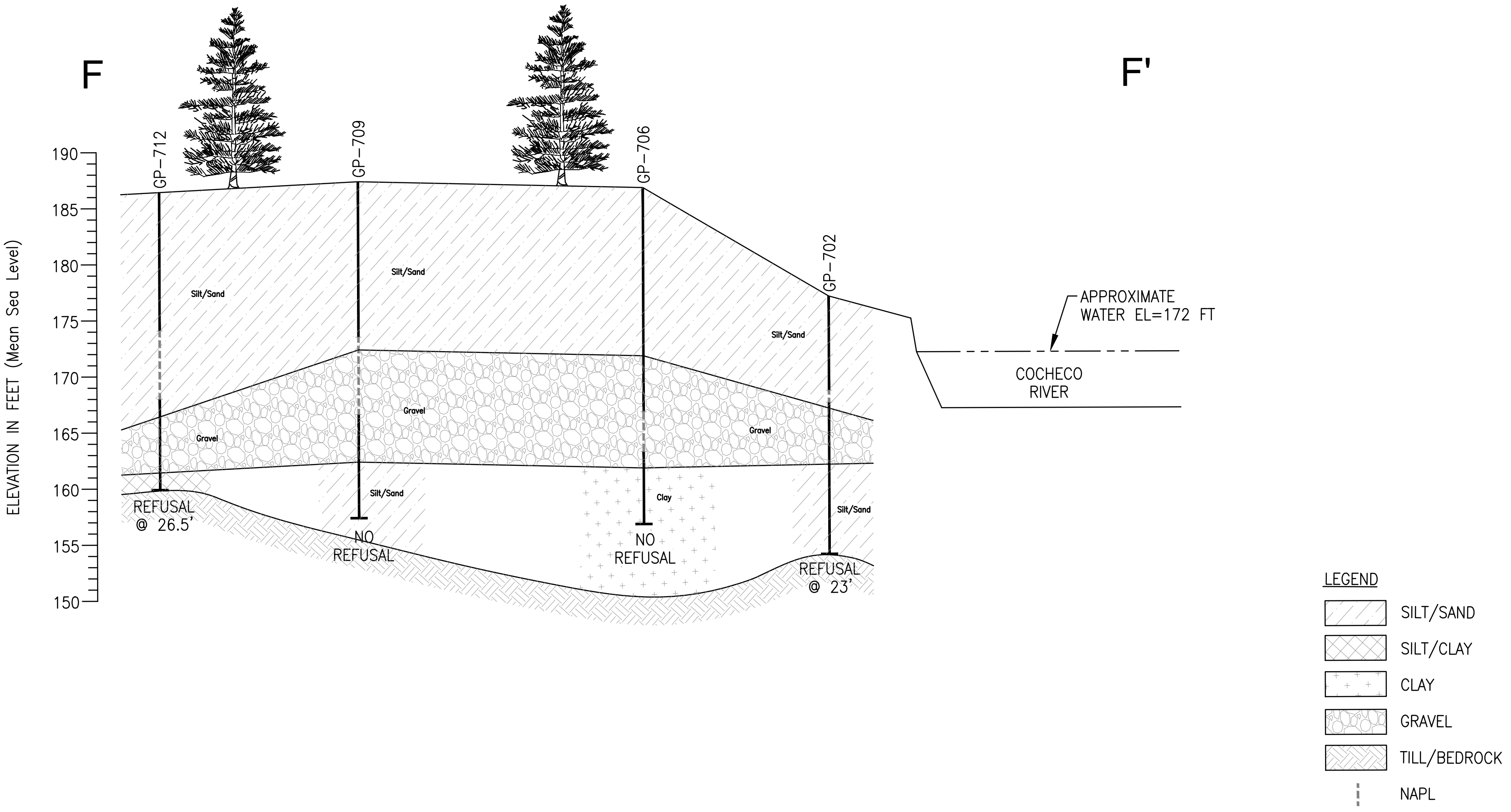
LEGEND

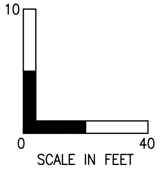
- ▨ SILT/SAND
- ▩ SILT/CLAY
- ⊹ CLAY
- ● GRAVEL
- ▧ TILL/BEDROCK
- ┆ NAPL



AECOM

NORTHERN UTILITIES PETROLANE SITE 60139732	**CROSS SECTION E-E'** **ROCHESTER, NEW HAMPSHIRE**
DATE: 03/26/21 DRWN: K.P.B.	**FIGURE 3-2e**





AECOM

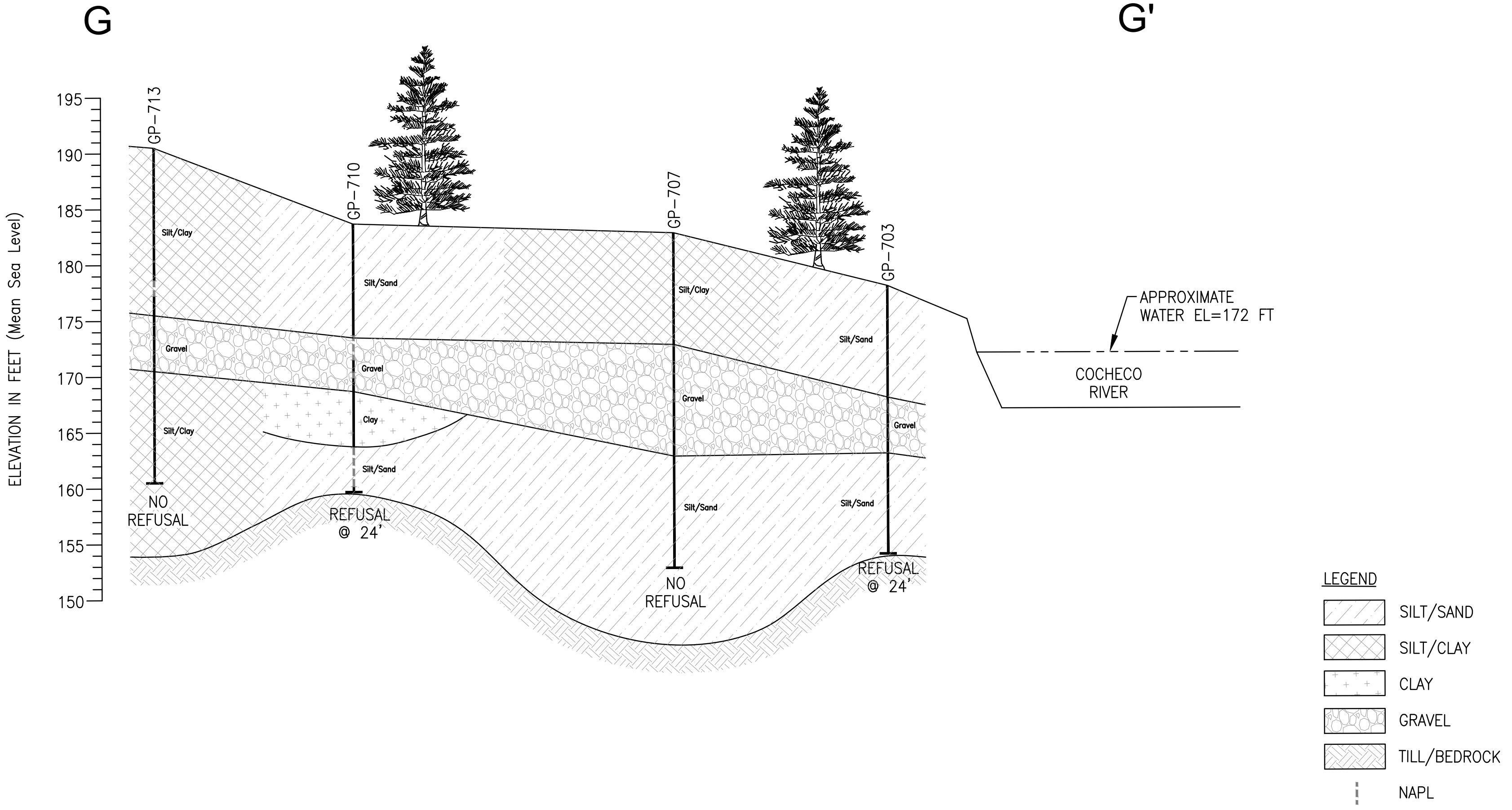
NORTHERN UTILITIES
PETROLANE SITE
60139732

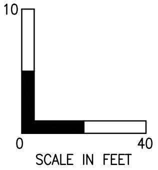
DATE: 03/26/21 DRWN: K.P.B.

CROSS SECTION F-F'

ROCHESTER, NEW HAMPSHIRE

FIGURE 3-2f





NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 03/26/21 | DRWN: K.P.B.

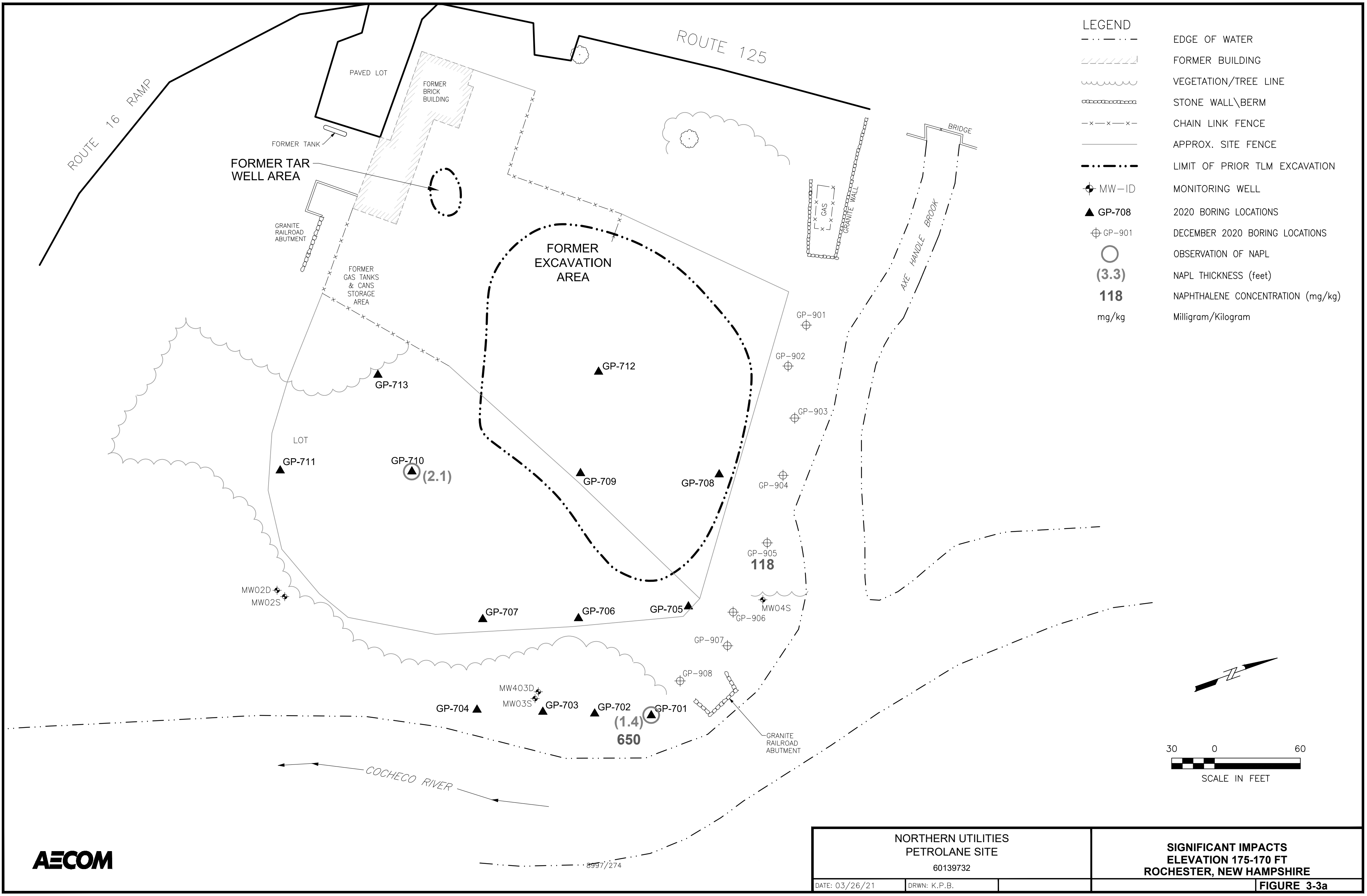
CROSS SECTION G-G'

ROCHESTER, NEW HAMPSHIRE

FIGURE 3-2g

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-2g - X-Sect G-G User: BarryK Plotted: Oct 26, 2021 - 2:46pm Xref's

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-3a User: BarryK Plotted: Oct 26, 2021 - 2:52pm Xref's:



AECOM

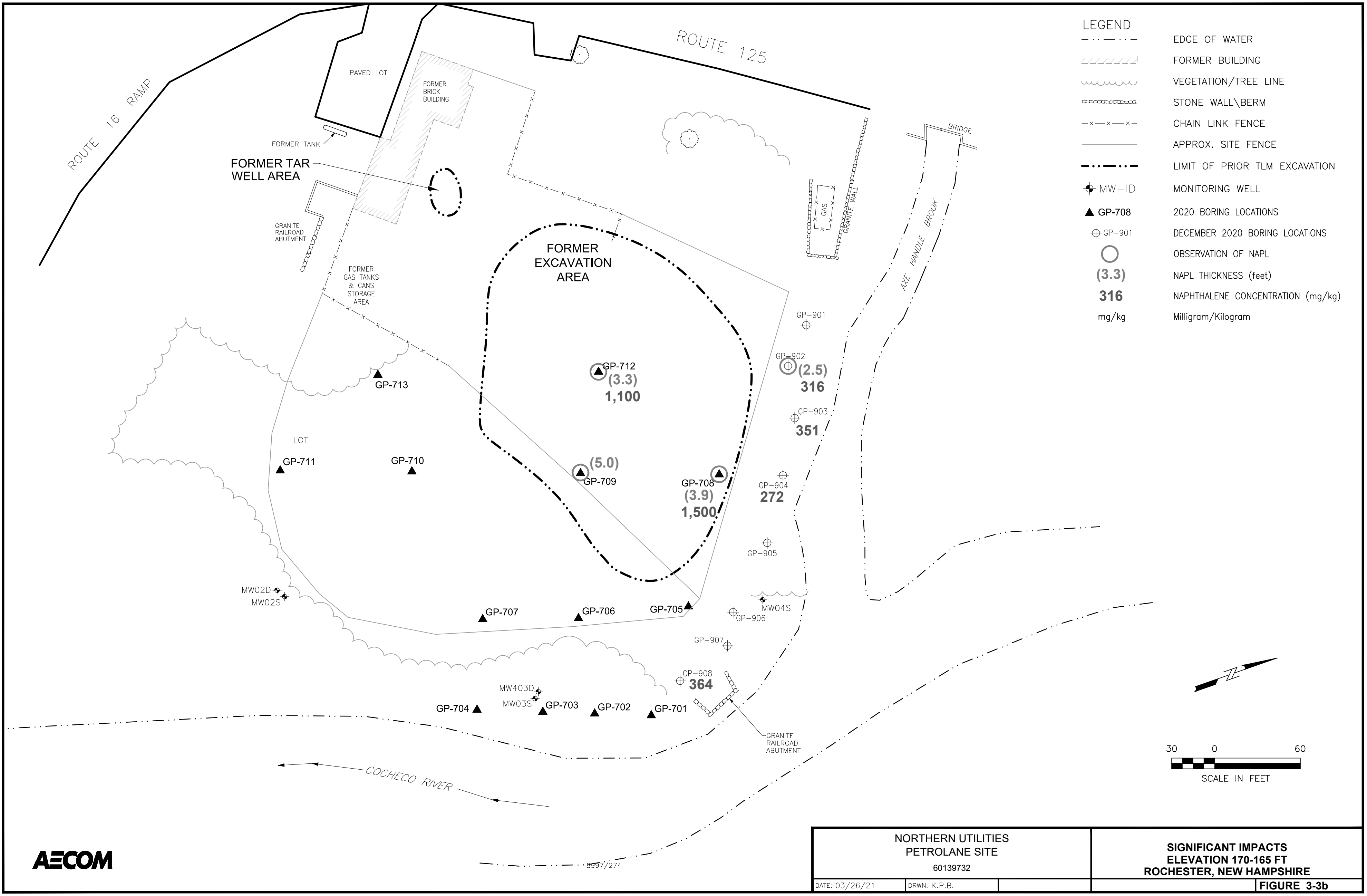
NORTHERN UTILITIES
PETROLANE SITE
60139732

SIGNIFICANT IMPACTS
ELEVATION 175-170 FT
ROCHESTER, NEW HAMPSHIRE

DATE: 03/26/21 DRWN: K.P.B.

FIGURE 3-3a

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-3b User: BarryK Plotted: Oct 26, 2021 - 2:58pm Xref's:



AECOM

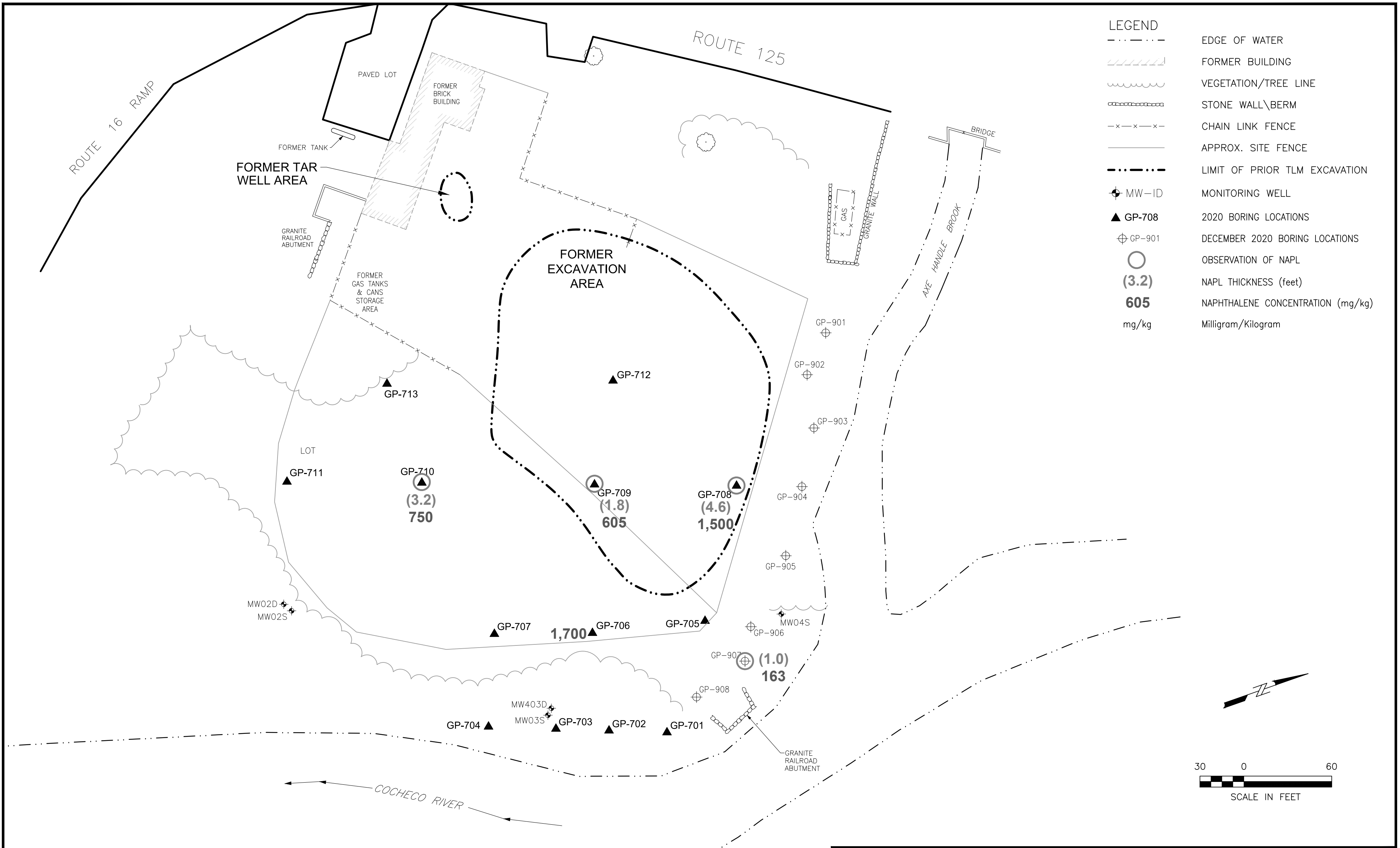
NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 03/26/21 DRWN: K.P.B.

SIGNIFICANT IMPACTS
ELEVATION 170-165 FT
ROCHESTER, NEW HAMPSHIRE

FIGURE 3-3b

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-3c User: BarryK Plotted: Oct 26, 2021 - 3:01pm Xref's:



AECOM

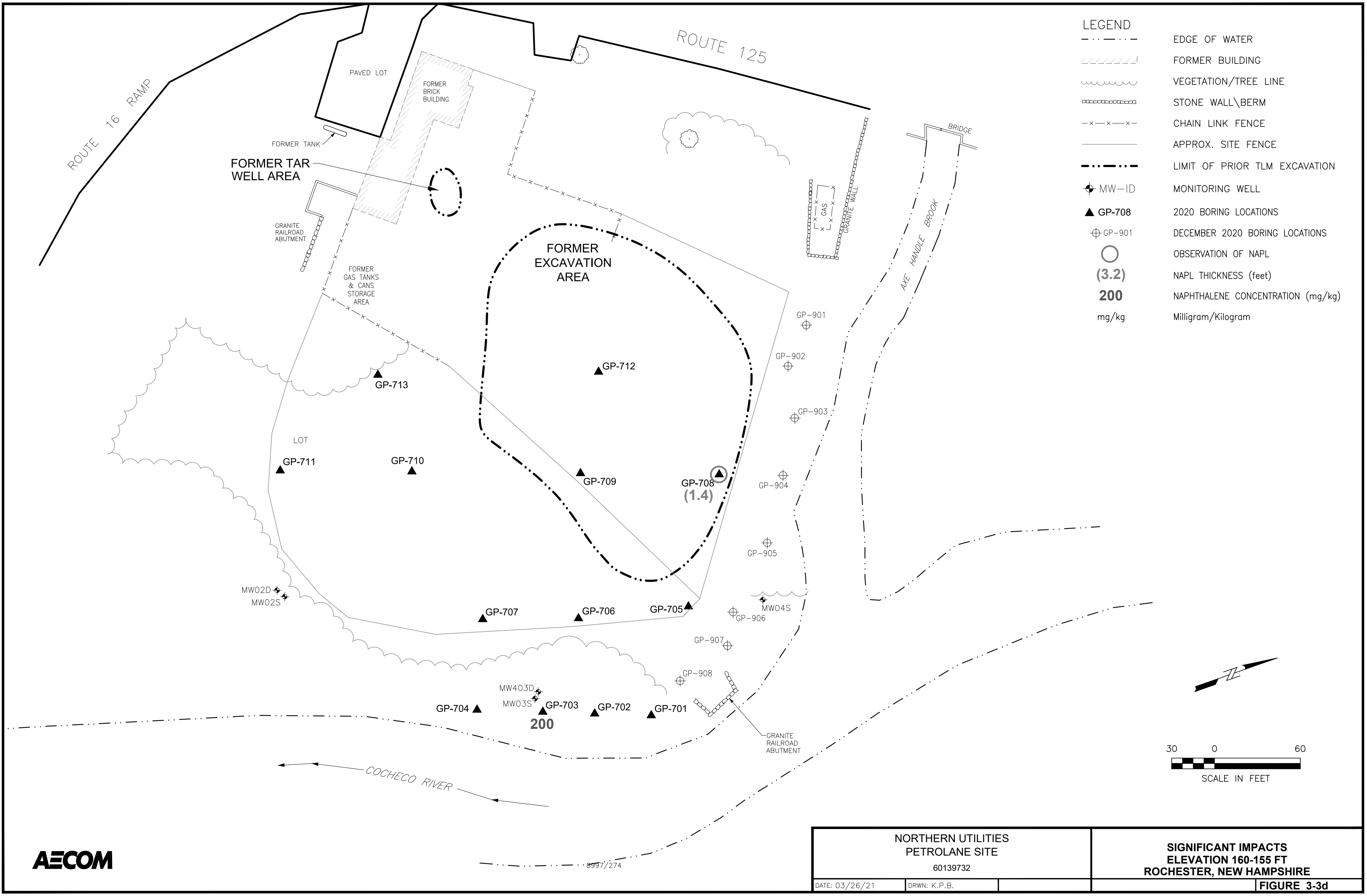
NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 03/26/21 DRWN: K.P.B.

SIGNIFICANT IMPACTS
ELEVATION 165-160 FT
ROCHESTER, NEW HAMPSHIRE

FIGURE 3-3c

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\60139732 02-02-21.dwg Layout: Fig 3-3d User: BarryK Plotted: Oct 26, 2021 - 3:06pm Xref's:



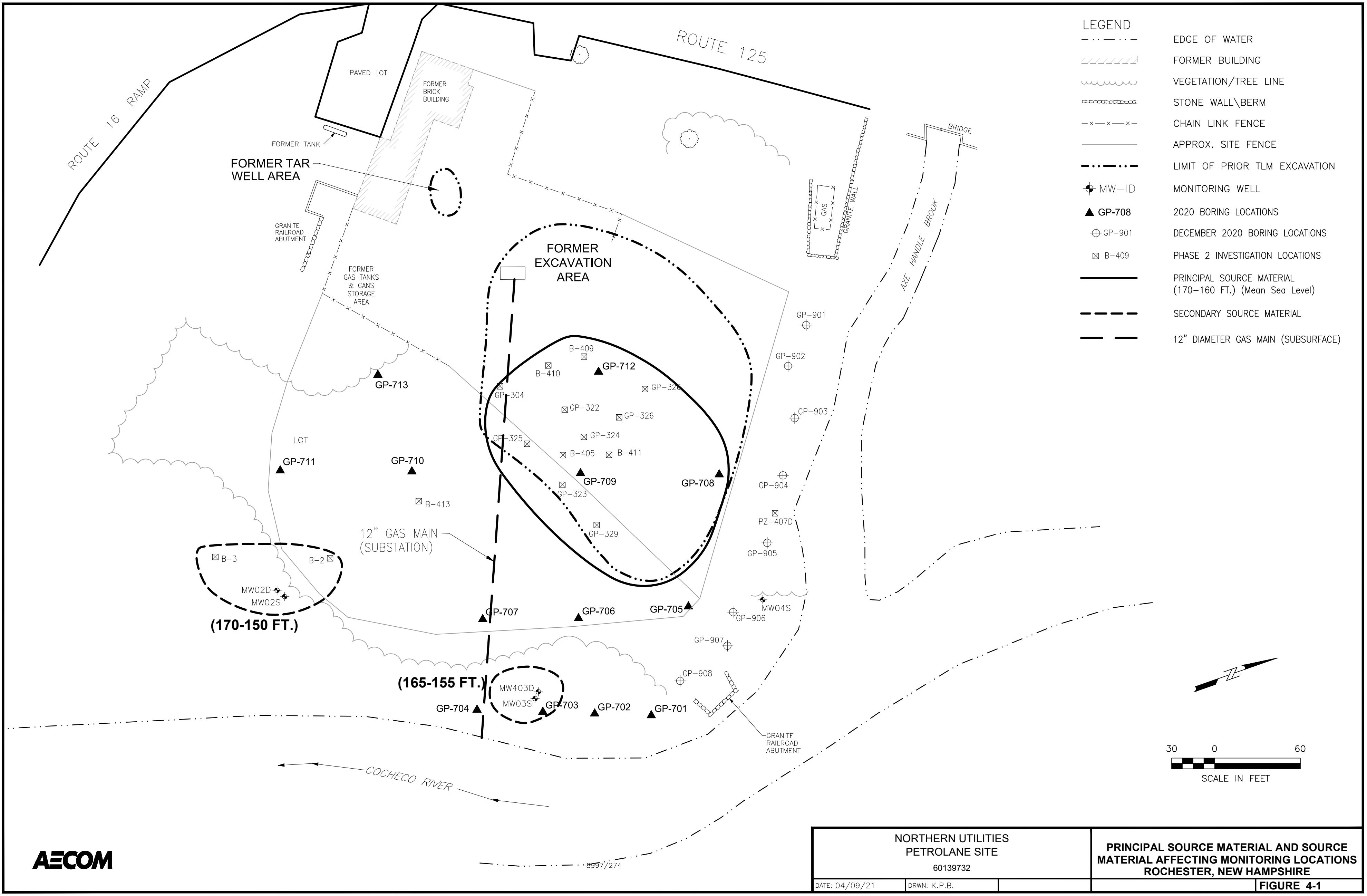
AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 03/26/21
DRWN: K.P.B.

SIGNIFICANT IMPACTS
ELEVATION 160-155 FT
ROCHESTER, NEW HAMPSHIRE

FIGURE 3-3d



AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 04/09/21 DRWN: K.P.B.

PRINCIPAL SOURCE MATERIAL AND SOURCE MATERIAL AFFECTING MONITORING LOCATIONS ROCHESTER, NEW HAMPSHIRE

FIGURE 4-1

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\Fig 4-2.dwg Layout: Fig 4-2 User: BarryK Plotted: Apr 09, 2021 - 10:19am Xref's:

AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 04/09/21
DRWN: K.P.B.

PRINCIPAL SOURCE MATERIAL AREA

ROCHESTER, NEW HAMPSHIRE

FIGURE 4-2

LOCATION OF MW-02

LOCATION OF MW-03

AECOM

NORTHERN UTILITIES
PETROLANE SITE
60139732

DATE: 04/14/21
DRWN: K.P.B.

SECONDARY SOURCE MATERIAL AREAS

ROCHESTER, NEW HAMPSHIRE

FIGURE 4-3

File: C:\Users\barryk\OneDrive - AECOM Directory\Working Jobs\Northern Utilities - Rochester NH\Fig 4-2.dwg Layout: Fig 4-3 User: BarryK Plotted: Apr 14, 2021 - 11:13am Xref's:

Appendix A Boring Logs

AECOM
250 Apollo Drive, Chelmsford MA 01824
(978) 905-2100 - office

GP-701

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 7/2/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 7/2/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.3/5	0.7-3.3	2-5	SILT, CLAY and SAND: 0 to 0.7 ft bgs: topsoil 0.7 to 3.3 ft: dark brown layers of SILT, greenish gray CLAY, light and reddish brown SILTY fine SAND
5-10	4.8/5	5-7.6, 8.1-9, 9-9.8	2, <5, 90	SILT, SAND and GRAVEL: 5.0 to 7.6: dark brown SILTY fine SAND and SILT 7.6 ft to 8.1 feet: dark gray fine to medium SAND 8.1 to 9.0 ft: SAND and GRAVEL (alluvium) 9.0 to 9.8 ft: alluvium with OLM in voids
10-15	4.8/5	10-11.4	110	SAND, GRAVEL and CLAY: 10.0 to 11.4 ft: alluvium with OLM in 11.4 to 14.8 ft: firm CLAY, grading from light brown to greenish gray at 12.3 ft bgs
15-20	1.5/5	15-16.5	100	SAND: poor recovery, very wet SAND with OLM. Sample did not remain intact in sample tube
20-25	4.3/5	20-22, 22-24.3	40, <1	CLAY: 20.0 to 22.0 ft: difficult sampling. Looks like alluvium with OLM pushed into CLAY 22.0 to 24.3 ft bgs: greenish gray CLAY
25-30	4.7/5	28.7-29.7	1-2	CLAY and SAND: 25.0 to 28.7 ft: greenish gray CLAY with some OLM smeared along outside of clay 28.7 to 29.7 ft: medium gray medium to coarse SAND

Total Depth 30'

Sample Collected

GP-701 (9-11) 070120 @ 15:00

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-702

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 7/2/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 7/2/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 23'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	2.5/5	-	-	SILT, SAND and CLAY: 0 - 2.0 ft bgs: dark SILT and CLAY loam 2.0 - 2.2 ft: clean fine SAND 2.2 - 2.5 ft: brown SILT and gray CLAY
5-10	4.8/5	8.3-9.4	30	SILT, CLAY, SAND and GRAVEL: 5.0 - 8.1 ft: medium brown and medium gray SILT and CLAY 8.1 - 8.3 ft: light gray SILTY fine SAND 8.3 - 9.4 ft: medium to coarse SAND and GRAVEL (alluvium) with OLM 9.4 - 9.8: light brown SILTY fine to medium SAND
10-15	4.4/5	10-11.4,11.4-11.9, 11.9-13.9, 19.9-14.4	30, 2, 2, 2	SAND, GRAVEL and SILT: 10.0 - 11.4 ft: medium to coarse SAND and GRAVEL (alluvium) with some sheen in upper half of interval 11.4 - 11.9 ft: reddish brown, medium to coarse SAND and GRAVEL with SILT 11.9 - 13.9 ft: yellowish orange SILT and fine SAND 13.9 - 14.4 ft:medium brown medium to coarse SAND
15-20	4.7/5	15-17, 17-19.7	4, 5-10	SAND: 15.0 - 17.0 ft: light brown fine to medium SAND, some SILT and GRAVEL 17.0 - 19.7 ft: light brown fine to medium SAND
20-23	3.1/3	20-23.1	5-10	SAND and BEDROCK: 20.0 - 23.1 ft: well sorted medium to coarse SAND 23.1 ft: weathered phyllite bedrock on bottom of sample tube

Refusal @ 23'

Sample Collected	**Comments:**
2 Samples: GP-702 (10-12) 070220 @ 8:30, GP-702 (16-18) 070220 @ 9:40	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-703

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 7/2/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 7/2/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 24'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	1.3/5	-	-	TOPSOIL: 0 to 1.3 ft bgs: topsoil over SILTY LOAM to 1.3 ft bgs.
5-10	4.8/5	6.5-9.5, 9.5-9.8	<1, <1	SILT, CLAY and SAND: 5.0 - 5.7 ft: dark brown SILT and CLAY, soft and wet 5.7 - 6.5 ft: olive gray SILT 6.5 - 9.5 ft: olive gray SILT and fine SAND, darker at bottom of interval 9.5 - 9.8 ft bgs: well sorted fine to medium SAND
10-15	4.8/5	10.11.2, 11.2-12.1, 12.1-13, 13-14.8	5, 1.5, 2.5, 2.5	SAND and GRAVEL: 10.0 - 11.2 ft: fine to medium SAND 11.2 - 12.1 ft: reddish brown silty SAND and GRAVEL over dark olive/gray SILTY SAND and GRAVEL 12.1 - 14.8 ft: ft: medium brown fine to medium SAND, some SILT
15-20	4.3/5	15-19.3	15-16	SILT and SAND: 15.0 - 19.3 ft: light brown silty fine to medium SAND
20-24	4.2/4	20-21.7, 21.7-24.2	3-10, 15-20	SILT and SAND: 20.0 - 21.7 ft: light brown silty fine to medium SAND 21.7 - 24.2 ft: well sorted medium to coarse SAND

Refusal @ 24'

Sample Collected	**Comments:**
GP-703 (22-24) 070220 @ 10:30	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-704

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH
Drilling Company: New England Boring Contractors
Surface Comp: Flush ☐ Stick Up ☐ Height: 2'

Project Number: 60139732
Drilling Method: Direct Push Technology
Bentonite (bgs): NA

Date Started Drilling: 7/2/2020
Rig Type: Geoprobe
Pre Pack Filter Pack (bgs): NA

Date Finished Drilling: 7/2/2020
Date Pre-Cleared: N/A
Riser (bgs): NA

Location: Route 125, Rochester, NH
Water Level While Drilling (bgs): N/A
Well Scrn: Depth (bgs): NA

Logged By: C. Howe
Total Depth of Boring (bgs): 30'
No well installed.

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	2.5/5	0-2.5	2-5	TOPSOIL and SILT: 0 to 2.5 ft bgs: brown, silty loam over light brown SILT, some fine SAND
5-10	3.9/5	5-6, 6.8-8.9	5, 2	SAND, SILT and CLAY: 5.0 - 6.0 ft: light brown silty fine SAND 6.0 - 6.8 ft: dark brown SILT with some fine SAND 6.8 - 8.9 ft: wet, medium brown SILT and SILTY CLAY grading to greenish gray SILT
10-15	3.4/5	11.4-12.5	1-2	SILT and SAND: 10.0 - 11.4 ft: greenish gray SILT over greenish gray SILT and fine SAND 11.4 - 12.5 ft: light gray fine SAND with some dark organic rich zones (roots) 12.5 - 13.1 ft: gray SILTY SAND and GRAVEL grading to medium brown in color 13.1- 13.4 ft: yellowish orange silty fine SAND
15-20	3.4/5	15.9-16.7, 17.4-18	<1, 1	SILT, SAND and GRAVEL: 15.0 - 15.9 ft: medium brown SILT grading to greenish gray color 15.9 - 16.7 ft: dark brown and gray SILT and SILTY fine SAND 16.7 - 17.4 ft: clean fine SAND with some SILT 17.4 - 18.0 ft: medium brown silty SAND and GRAVEL 18.0 - 18.4 ft: reddish brown fine SAND with some SILT
20-25	3.3/5	20-20.4, 20.4-21.4, 22.2-23.3	4, <1, 0.5-2	SILT and SAND: 20.0 - 20.4: medium brown SILT, SAND and GRAVEL 20.4 - 21.4 ft: reddish brown SILT and fine SAND 21.4 - 22.2 ft: reddish brown medium to fine SAND 22.2 - 23.3 ft: gray medium to fine SAND
25-30	2.2/5	-	-	SAND: 25.0 - 27.2 ft: gray medium to coarse SAND

End of Boring @ 30'
No Refusal Encountered

Sample Collected

GP-704 (25.2-27.2) 070220 @ 11:45

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-705

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 7/1/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 7/1/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.6/5	0.7-3.6	1	TOPSOIL, SILT and CLAY: 0 - 0.7 ft bgs: topsoil over rock 0.7 to 3.6 ft: layers of yellowish orange SILT and greenish gray CLAY
5-10	4.7/5	-	-	SILT and CLAY: 5.0 - 9.7 ft: layers of yellowish orange SILT and greenish gray CLAY
10-15	3.1/5	11.6-13.1	1	SILT and CLAY: 10.0 - 11.6 ft: layers of yellowish orange SILT and greenish gray CLAY 11.6 - 13.1 ft: sandy SILT grading from medium brown to very dark brown with depth
15-20	4.8/5	15-17.6	<1.5	SILT, CLAY, SAND and GRAVEL: 15.0 - 17.6 ft: medium brown to dark gray SILT and fine SAND 17.6 - 18.3 ft: olive gray SILTY CLAY 18.3 - 18.9 ft: dark brown to black SILT 18.9 - 19.8 ft: gravelly alluvium (SAND and GRAVEL)
20-25	4.8/5	20-21.5	20-25	SAND, GRAVEL, and CLAY: 20.0 - 21.5 ft: medium SAND and GRAVEL with OLM 21.5 - 24.8 ft: light brown to greenish/gray CLAY
25-30	1.7/5	25-26.7	<5	SILT, CLAY and SAND: 25.0 - 26.7 ft: loose, medium brown SILT, CLAY and fine SAND (possible hole collapse)

End of Boring @ 30'
No Refusal Encountered

Sample Collected

GP-705 (20-22) 070120 @ 12:50

Comments:
NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-706

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 7/1/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 7/1/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.5/5	1-2	2-3	TOPSOIL, SILT and SAND: 0 - 1.0 ft bgs: dark brown CLAY LOAM 1.0 - 3.5 ft: yellow/orange to light brown SILT and fine SAND
5-10	2.7/5	5.8-6.6	7-7.2, 1-2	CLAY, SILT and SAND: 5.0 - 5.5 ft: light gray CLAY with layers of light brown SILT and SAND 5.5 - 5.8 ft: light gray CLAY 5.8 -6.6 ft: yellow orange SIL TY fine SAND with dark brown interval at 6-6.2 ft 6.6 - 6.9 ft: light gray CLAY 6.9 -7.7 ft: light brown SILT
10-15	4.8/5	-	-	SILT and SAND: 10.0 - 10.4 ft: medium brown SILT 10.4 - 11.1 ft: dark brown SILT and fine SAND 11.1 - 14.4 ft: SILT layers of varying color 14.4 - 14.8 ft: light brown SILTY SAND and GRAVEL (perhaps weathered rock)
15-20	4/5	17-17.5	<1	SILT, SAND and GRAVEL: 15.0 - 15.9 ft: light brown SILT 15.9 - 17.0 ft: medium to coarse SAND and GRAVEL 17.0 - 17.5 ft: black SILTY SAND and rock fragments (weathered phyllite) 17.5 - 19.0 ft: gray/brown/reddish medium to coarse SAND and GRAVEL
20-25	4.8/5	20-23.5	>150	CLAY, SAND and GRAVEL: 20.0 - 23.5 ft: black/red medium to coarse SAND and GRAVEL, some thin layers of light gray fine SAND 23.5 - 24.8 ft: greenish gray CLAY
25-30	4.7/5	29-29.7	0.5	CLAY and SAND: 25.0 - 29.0 ft: greenish gray CLAY 29.0 - 29.7 ft: greenish gray fine to medium SAND

End of Boring @ 30'
No Refusal Encountered

Sample Collected	**Comments:**
GP-706 (21.5-23.5) 070120 @ 11:15	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-707

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 7/1/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 7/1/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	4.2/5	-	-	SAND and CLAY: 0 - 3.4 ft bgs: light to medium brown SILTY fine SAND with some thin CLAY layers and medium to coarse SAND horizons 3.4 - 4.2 ft: yellow/orange SILT with some darker grains, faint odor but no significant PID signal
5-10	4.5/5	7.3-9.5	1	SILT: 5.0 - 7.3 ft: yellow/orange SILT 7.3- 9.5 ft: light brown SILT, some fine SAND
10-15	4.5/5	-	-	SILT, SAND and GRAVEL: 10.0 - 12.7 ft: light brown SILT, some thin layers of fine SAND at bottom of interval 12.7 - 12.9 ft: light brown medium to coarse SAND 12.9 - 13.2 ft: light gray fine SAND 13.2 - 14.5 ft: SAND and GRAVEL (alluvium)
15-20	3.6/5	15-17.3, 17.3-18.6	0, 0	SAND and GRAVEL: 15.0 - 17.3 ft: light brown to light gray layers of SAND and GRAVEL (alluvium) 17.3 - 18.6: ft: light brown medium SAND with layers of coarse SAND and GRAVEL, some SILTY SAND layers
20-25	3.8/5	20-23.6	0	SAND and SILT: 20.0 - 23.6 ft: light brown fine to medium SAND with some SILT and coarse SAND (possible hole collapse) 23.6 - 23.8 ft: light brown SILT and fine SAND
25-30	3.8/5	25-28.1	<1	SAND and SILT: 25.0 - 28.1 ft: light brown fine to medium SAND 28.1 - 28.8 ft: light gray SILTY fine SAND

End of Boring @ 30'
No Refusal Encountered

Sample Collected

GP-707 (26.8-28.8) 070120 @ 10:00

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-708

Page 1 of 1

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 6/29/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 6/29/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 24.5'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	4.5/5	-	-	SILT AND SAND: 0 - 0.8 ft bgs: brown topsoil over olive gray SILT 0.8 - 4.5 ft: yellowish orange fine SAND to 4.5 ft bgs.
5-10	4.1/5	8.3-8.8, 8.8-9.1	10, 40	SILT and SAND: 5.0 - 5.6 ft: yellowish orange fine SAND 5.6 - 8.3 ft: light brown fine SAND and SILT grading to olive gray at 7.5 ft bgs 8.3 - 8.6 ft: black fine SAND and SILT w/petroleum odor 8.8 - 8.8 ft: weathered rock (biotite rich), petroleum odor 8.8 - 9.1 ft: brown SAND and GRAVEL (alluvium), OLM in voids
10-15	3.9/5	10-11.1, 11.1-13.9	7, 150-200	SILT, SAND and GRAVEL: 10.0 - 11.1 ft: brown fine SAND and SILT, sheen rising to surface 11.1 - 13.9 ft: bgs, medium to coarse SAND and GRAVEL with OLM
15-20	4.6/5	12-12.9, 15.9-16.4, 16.4-19.6	200, 150, 20-60	SAND, GRAVEL and SILT: 15.0 - 15.9 ft: medium to coarse SAND and GRAVEL with OLM 15.9 - 16.4 ft: light brown SILT and fine SAND over thin layer of greenish gray CLAY 16.4 - 19.6 ft: tan to light brown fine SAND and SILT, some thin silt horizons and OLM stained medium SAND horizons
20-24.5	4.3/5	20-20.5, 20.5-21, 21-21.7, 21.7-23.1, 23.1-24.3	200, 30, 10, 250, 100	SAND, GRAVEL and SILT: 20.0 - 20.5 ft: SAND and GRAVEL (alluvium) with OLM 20.5 - 21.0 ft: light brown to tan SILT and fine SAND 21.0 - 21.7 ft: greenish gray SILT and CLAY layers 21.7 - 23.1 ft: fine to medium SANDs some SILT and GRAVEL layers, coarser layers with OLM and dark staining 23.1 - 24.3 ft: light brown to tan SILT and fine SAND

Refusal @ 24.5'

Sample Collected

2 Samples: GP-708(11.9-13.9) 62920 @ 10:26, GP-708(21.7-23.7) 62920 @ 10:57

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-709

Page 1 of 1

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 6/26/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 6/26/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	**Recovery (ft/ft)**	**PID Depth (feet)**	**10.6 PID (ppm)**	
0-5	3.8/5	-	-	SILT and SAND: 0 - 3.8 ft bgs: SILT with fine to medium SAND and some GRAVEL, brick and concrete, grading from light brown to dark brown at 2.1 ft bgs.
5-10	2.2/5	-	-	SILT and SAND: 5.0 - 7.2 ft: dark brown SILT with fine to medium SAND and some GRAVEL, brick and concrete pieces
10-15	1.2/5	10.8-11	1	SILT, SAND and CLAY: 10.0 - 10.8 ft: dark brown SILT with fine to medium SAND and some GRAVEL, brick and concrete 10.8 - 11.0 ft: black, SILT and CLAY, loose with faint petroleum odor 11.0 - 11.2 ft: stiff, greenish gray CLAY
15-20	2.8/5	16.517.8	50	CLAY, SAND and GRAVEL: 15.0 - 16.5 ft: greenish gray, CLAY 16.5 - 17.8 ft: medium to coarse SAND and GRAVEL (alluvium) with voids filled with OLM, strong odor
20-25	4.8/5	20-21, 21.5-23.3	200, 60-100	SAND, GRAVEL, SILT and CLAY: 20.0 - 21.0 ft: medium to coarse sand and gravel (alluvium) with voids filled with OLM, strong odor 21.0 - 21.5 ft: greenish gray SILT 21.5 - 23.3 ft: layers of fine to medium SAND, OLM in voids of coarser layers 23.3 - 23.6 ft: greenish gray CLAY 23.6 - 24.8 ft: light brown and gray layers of SAND and SILT, some reddish brown layers of medium SAND
25-30	3.9/5	25-26.2	10-30	SILT and SAND: 25.0 - 26.2 ft: brown layers of medium SILT, fine and medium SAND, less OLM present 26.2 - 27.9 ft: greenish gray layers of SILT, fine and medium SAND 27.9 - 28.9 ft: coarse SAND, some silt and fine sand, over weathered bedrock (phyllite)

End of Boring @ 30'
No Refusal Encountered

Sample Collected	**Comments:**
2 Samples: GP-709 (20-22) 62620 @ 15:16, GP-709 (22-24) 62620 @ 15:33	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-710

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 6/30/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 6/30/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 24'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.2/5	0-1.7	0	TOPSOIL, SILT and SAND: 0 - 1.7 ft bgs: SILTY loam over dark brown SILTY SAND 1.7 - 2.4 ft: light brown fine to coarse SAND and GRAVEL, small gray CLAY horizons 2.4 - 3.2 ft: yellow/orange to rusty red medium to coarse SAND
5-10	4.8/5	-	-	SAND and SILT: 5.0 - 5.7 ft: yellow/orange medium SAND with dark brown SILTY find SAND layers 5.7 - 8.2 ft: light brown SILT grading to dark brown with depth 8.2 - 9.8 ft: medium brown SILT with some small, silvery particles (mica?)
10-15	3.8/5	13.3-13.8	7-12	SAND and GRAVEL: 10.0 - 12.1 ft: medium brown, loose, wet SILT with some OLM, dark brown grading to medium brown fine to medium SAND, some coarse SAND and GRAVEL 12.1 - 12.4 ft: dark brown to black fine to mediun SAND 12.4 - 12.8 ft: medium gray fine SAND over brown medium to coarse SAND 12.8 - 13.1 ft: dark brown fine SAND with woody debris 13.1 - 13.3 ft: gray fine SAND and SILT 13.3 - 13.8 ft: medium to coarse SAND and GRAVEL (alluvium) with some OLM
15-20	4.7/5	15-19	20	CLAY: 15.0 - 19.7 ft: greenish gray CLAY.
20-24	4.2/4	20-20.6, 20.6-23.2	40-70	CLAY, SAND and SILT: 20.0 - 20.6 ft: greeyish gray CLAY with some sandy horizons containing OLM 20.6 - 23.2 ft: fine to medium SAND, dark with OLM, some thin greenish gray CLAY layers 23.2 - 23.5 ft: greenish gray CLAY and light brown SILT layers, less OLM with depth 23.5 - 23.7 ft: ligth brown coarse SAND 23.7 - 24.2 ft: light brown fine SAND and SILT

Refusal @ 24'

Sample Collected	**Comments:**
GP-710 (20-22) 063020 @ 14:40	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-711

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 6/30/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 6/30/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 24'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.7/5	0-3.7	0	TOPSOIL, SAND, SILT and CLAY: 0 - 3.7 ft bgs: medium brown layers of fine to medium SAND, SILT and CLAY to 3.7 ft bgs.
5-10	4.3/5	7.5-8.8, 8.8-9.3	2, 4	SAND, SILT and CLAY: 5.0 - 6.2 ft: medium brown layers of fine to medium SAND, SILT and CLAY 6.2 - 9.3 ft: layers of dark brown SILT and fine SAND with woody debris, some odor
10-15	4.8/5	10.11.1, 11.1-14.8	6-17, 5-6	SAND, GRAVEL, CLAY and SILT: 10.0 - 11.1 ft: fine to coarse SAND and GRAVEL with OLM in voids 11.1 - 14.8 ft: greenish gray CLAY layers, fine to medium SAND and SILT with reddish brown coarser horizons
15-20	4.8/5	15-19.8	1	SAND and GRAVEL: 15.0 - 19.8 ft: layers of fine to coarse SAND, some SILT layers, various colors
20-24	3.3/4	20.2-22.6	0	SAND and SILT: 20.0 - 20.2 ft: SANDY SILT 20.2 - 22.6 ft: light brown fine to medium SAND 22.6 - 23.3 ft: medium to coarse SAND

Refusal @ 24'

Sample Collected

GP-711 (10-12) 060320 @ 11:30

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

GP-712

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Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**	
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**	**NA**
Date Started Drilling: 6/29/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**	**NA**
Date Finished Drilling: 6/29/2020	**Date Pre-Cleared: N/A**	**Riser (bgs):**	**NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs):**	**NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 26.5'**	***No well installed.***	

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	2.5/5	-	-	TOPSOIL: 0 - 2.5 ft bgs: dark loam with some GRAVEL
5-10	2.5/5	5-10	2	SILT and SAND: 5.0 - 7.5 ft: dark brown to black SILT and fine SAND
10-15	2.7/5	10-11.8, 12.2-12.7	10, 50	SILT, SAND and CLAY: 10.0 - 11.8 ft: dark brown to black SILT and fine SAND, wet with some GRAVEL 11.8 - 12.2 ft: dark gray SILTY CLAY 12.2 - 12.7 ft: medium to coarse SAND with woody debris and some OLM
15-20	4.7/5	15-16.3, 16.3-18.3, 18.3-19.1, 19.1-19.7	20, 10-15, 10-35, 20	SAND and SILT: 15.0 - 18.3 ft: layers of dark brown to black fine SAND and CLAY, some stained horizons with OLM 18.3 - 19.1 ft: layers of fine to medium SAND with some SILT and CLAY, various colors 19.1 - 19.7 ft: light gray fine SAND, some CLAY layers and stained layers
20-25	4.2/5	20-21.4, 21.4-23.3, 23.3-24.2	30-100, 30-100, 25	CLAY, SAND and GRAVEL: 20.0 - 21.4 ft: light gray fine SAND with some CLAY layers 21.4 - 23.3 ft: layers of silt and fine to medium SAND with some thin CLAY horizons 23.3 - 24.2 ft: gray fine to medium SAND and GRAVEL, some SILT
25-26.5	1/1.5	25-26	3	BEDROCK: 25.0 - 26.0 ft: weathered bedrock to 26 ft bgs.

Refusal @ 26.5'

Sample Collected	**Comments:**
GP-712 (20-22) 062920 @ 14:30	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-713

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 6/29/2020	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 6/29/2020	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): N/A**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30'**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	4.8/5	-	-	SILT and CLAY: 0 - 4.8 ft bgs: light brown SILT with some clay
5-10	4.5/5	-	-	SILT and CLAY: 5.0 - 9.5 ft: light brown SILT and SILTY CLAY with some CLAY horizons at 7.5-7.7 ft
10-15	4.8/5	-	-	SILT and CLAY: 10.0 - 12.5 ft: light to medium brown SILT and SILTY CLAY 12.5 - 14.8 ft: greenish gray CLAY and SILT
15-20	4.1/5	-	-	SILT, SAND, GRAVEL and CLAY: 15.0 - 16.3 ft: light brown fine SAND and SILT 16.3 - 17.7 ft: SILT, SAND and GRAVEL (alluvium) with OLM in some horizons, light odor 17.7 - 19.1 ft: greenish gray, tight CLAY
20-25	4.6/5	-	-	SAND and SILT: 20.0 - 20.2 ft: fine to medium SAND, medium brown to black layers 20.2 - 21.3 ft: greenish gray CLAY with some SILT layers 21.3 - 24.6 ft: light brown fine to medium SAND with some layers of greenish gray SILT and CLAY, and dark bands of medium SAND
25-30	3.9/5	-	-	SAND and CLAY: 25.0 - 25.5 ft: light brown medium to coarse SAND 25.5 - 26.3 ft: greenish gray CLAY with several red/brown fine to medium SAND layers 26.3 - 28.9 ft: light brown fine to medium SAND with some CLAY and SILT horizons

End of Boring @ 30'
No Refusal Encountered

Sample Collected
GP-713 (16-18) 063020 @ 9:45

Comments:
NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-901

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/4/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 12/4/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 2 feet**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 6.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.3/5		1.2 to 1.4	SILT, SAND and GRAVEL: 0 - 1.3 ft bgs: silty brown Loam 1.3 - 2.5 ft: gray fine sand, some silt 2.5 - 3.3: silt, sand and gravel (alluvium)
5-6	1/1			SILT, SAND and GRAVEL: 5.0 - 5.8 ft: alluvium, some sheen and OLM in blebs 5.8 - 6.0 ft: bedrock

End of Boring @ 6'
Refusal Encountered

Ground surface approximately 3 feet above Axe Handle Brook surface

Sample Collected

4 - 6
moderately impacted horizon with OLM in blebs

Comments:
NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

AECOM

250 Apollo Drive, Chelmsford MA 01824
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GP-902

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/3/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 12/3/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 2'**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 10.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.9/5		0	SAND: 0 - 0.7 ft bgs: topsoil and organic debris 0.7 - 3.2 ft: light brown fines sand, some silt 3.2 - 3.9: medium to coarse sand, some gravel
5-10	3.5/5	5 6 7.9	5 <2 30	SILT, SAND and GRAVEL: 5.0 - 6.0 ft: medium to coarse sand and gravel, some sheen 6.0 - 8.5 ft: silt, fine sanc and gravel, some sheen
10 - 12.5	1.6/2.5			SAND and GRAVEL: Poor recovery in highly impacted area Significant OLM, potentially saturate Recovered material was disturbed during sampling, difficult to characterize lithology

End of Boring @ 12.5'
Refusal Encountered

Ground surface approximately 4 feet above Axe Handle Brook surface.
Located along A-A transect (GP-712 and GP-713)

Sample Collected

significant impact (OLM saturation) in lower horizon above bedrock

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-903

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/3/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 12/3/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 2'**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 10.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	4.2/5	4.2	4	SILT, SAND and GRAVEL: 0 - 3.7 ft bgs: dark silty loam and fine sand grading to light brown fine sand 0.7 - 3.2 ft: light brown fines sand, some silt 3.7 - 4.2 ft: medium to coarse sand and gravel, some sheen
5-10	5/5	5 - 8 8 - 10	67 - 150 2 - 3	CLAY, SILT, SAND and GRAVEL: 5.0 - 6.1 ft: light brown silty fine sand, some sheen 6.1 - 7.9 ft: gravel and rock with some silt and sand (alluvium), some OLM and odor, high PID 7.9 - 8.4 ft: light brown silt and clay 8.4 - 10.0 ft: light gray layers of silt, fine sand, loose clay
10 - 15	4.5/5		< 4	SILT and SAND: 10 - 13 ft: light gray silt and fine sand layers 13 - 14.5 ft: weathered rock
15 - 16.4	1/1.4			SAND and GRAVEL: 15 - 16: dark brown medium to coarse sand and gravel, oily sheen, PID of up to 35 due to fall in from above

End of Boring @ 16.4'
Refusal Encountered

Ground surface approximately 3 feet above Axe Handle Brook surface.
Located midway between GP 902 and GP-904

Sample Collected

6.5 - 8.5
moderate to highly impacted horizon

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-904

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐tick Up ☐eight: 2'**	
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs):**	**NA**
Date Started Drilling: 12/3/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs):**	**NA**
Date Finished Drilling: 12/3/20	**Date Pre-Cleared: N/A**	**Riser (bgs):**	**NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 2'**	**Well Scrn: Depth (bgs):**	**NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 20.0**	***No well installed.***	

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.8/5		0	SILT and SAND: 0 - 3.8 ft bgs: topsoil over fine sand and silt, grading from light brown to light gray at 2.5 ft bgs
5-10	5/5	5 9 10	0 3-6 17	SILT, SAND and GRAVEL: 5.0 - 7.3 ft: brown fine sand and silt 7.3 - 9.2 ft: some gray medium to coarse sand over silt, sand and gravel (alluvium), some sheen 9.2 -- 10.0 ft: silt and fine sand, OLM at 9 - 9.5
10 - 15	5/5	10 10.2 - 14 14	60 1 - 4 0	CLAY, SILT, SAND and GRAVEL: 10 - 10.2 ft: sand and gravel (alluvium), some OLM 10.2 - 10.8 ft:gray fine sand and silt, some OLM 10.8 - 14.3 ft: layers of gray fine sand, silty sand, clay 14.3 - 15 ft: fine to medium gray sand
15 - 20	5/5	15 - 16.5 16.5 - 17.3 17.3 - 20	20 - 40 5 - 7 2 - 5	SILT and SAND: 15 - 16.5 ft:light brown medium silty sand, sheen present 16.5 - 17.3 ft: brown silty fine sand, sheen at 17.0 - 17.3 17.3 - 18.0 ft: gravelly f - m brown sand over silty sand 18.0 - 20.0 ft: gray silt, sand and gravel (till?)

End of Boring @ 20.0
Refusal Encountered

Ground surface approximately 2 feet above Axe Handle Brook surface.
Located along B-B transect (GP-708 to GP-711)

Sample Collected	**Comments:**
9 - 11 moderately impacte horizon	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

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GP-905

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/3/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 12/3/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 2'**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	4.0/5		0	SILT and SAND: 0 - 4.0 ft bgs: fine sand and silt grading from light brow to tan at 2.0 ft
5-10	2.3/5	5 - 6.8 6.8 - 7.3	15 1	SILT and SAND: 5.0 - 6.8 ft: brown fine sand and silt, significant sheen 6.8 - 7.3 ft: dark gray fine sand and silt, significant sheen
10 - 15	3.7/5	10 10.3 - 13.7	2 <1	CLAY, SILT, SAND and GRAVEL: 10 - 10.3 ft: silt, sand and gravel, some sheen 10.3 - 11.7 ft: soft gray clay 11.7 - 13.7 ft: fine gray sand with some layers of silt and clay
15 - 20	4.3/5		6 - 20	SAND: 15 - 16.5 ft: reddish brown f - m sand, gray silt and clay layer at 15.4 - 15.6 16.5 - 17.6 ft: gray f - m sand 17.6 - 19.3 ft: reddish brown f - m sand
20 - 25	4.2/5		2 - 7	SAND: 20 - 24.2 ft: clean tan sand, some finer and coarser horizons
25 - 30	4.5/5		4 - 6	SAND: 25 - 29.5 ft: same as above

End of Boring @ 30.0
Refusal Not Encountered

Ground surface approximately 4 feet above Axe Handle Brook surface.
Located midway between GP 904 and GP-906

Sample Collected

5 - 7
moderately impacted horizon

Comments:
NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-906

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/4/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 12/4/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 15**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	2.8/5		0	SILT: 0.8 ft bgs: silty brown loam ft: firm tan silt, some gravel
5-10	4.0/5		0	SILT: 9.0 ft: same as above
10 - 15	2.9/5		0	SILT and SAND: 11.8: same as above 12.3 ft: tan f - m sand stiff tan silt
15 - 20	4.1/5	15 - 17 17.5 18	11 - 17 100 3	CLAY, SILT, SAND and GRAVEL: 15 - 16.0 ft: tan silt and fine sand 16.0 - 17.7 silt, sand and gravel, OLM starting at 17.0 17.7 - 18.1 ft: moderately firm clay, grading from olive gray to blue
20 - 25	5.0/5			CLAY: 20 - 25.0 ft: blue gray clay
25 - 30	3.8/5			CLAY: 25 - 28.8 ft: same as above

End of Boring @ 30.0
Refusal Not Encountered

Ground surface approximately 10 feet above Axe Handle Brook surface.
Located along C-C transect (GP-705 to GP-707) near northern slope of RR abutment

<u>Sample Collected</u>

16 - 18
thin horizon of OLM saturated material (17 - 17.7)
over thick clay

Comments:

NR = No Recovery
ND = Non Detect
NA = Not Applicable due to Hand Clearing
NM = Not Measured
Fill = brick/ceramic/coal/ash/wood fragments
SAA = Same As Above
F = Fine, M = Medium, C = Coarse, S = Sand

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GP-907

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐ Stick Up ☐ Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/4/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling: 12/4/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 16.5**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	**Recovery (ft/ft)**	**PID Depth (feet)**	**10.6 PID (ppm)**	
0-5	2.9/5		0	CLAY, SILT and SAND: 0 - 1.0 ft bgs: clayey loam over firm olive gray clay 01.0 - 2.1 ft: medium brown fine sand and silt, some m - c sand 2.1 - 2.4 ft: olive-gray clay 3.4 ft: tan medium sand, some f sand and gravel
5-10	3.3/5		0	CLAY, SILT and SAND: 5 -5.5 ft bgs: same as above 8.9 ft:clay with layers of fine sand and silt, grading from tan to medium brown at 8.4 ft
10 - 15	2.9/5		0	SILT and SAND: 12.9 ft: same as above
15 - 20	4.3/5		<2	SILT and SAND: 16.6 ft: light brown f - m sand ft: dark gray f - m sand and silt, loose, some roots sand and gravel (alluvium)
20 - 25	4.8/5			SAND and GRAVEL: 20 - 20.6 ft: ft: medium to coarse sand, some fine sand 20.6 - 21.4 ft: dark gray sand and gravel (alluvium), some sheen 21.4 - 23.0 ft: alluvium, some sheen and OLM at 22 - 23 ft 23.0 - 24.8 ft: firm clay
25 - 30	3.4/5			CLAY: 25 - 28.4 ft: firm gray clay

End of Boring @ 30.0
Refusal Not Encountered

Ground surface approximately 14 feet above Cocheco River surface.
between GP 906 (C-C) and GP-701 (D-D), closer to transect C-C, on top of RR abutment

Sample Collected	**Comments:**
21.5 - 23.5 moderately impacted horizon	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

AECOM
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(978) 905-2100 - office

GP-908

Page ___1___ of ____1___

Project Name: Unitil - Rochester, NH	**Drilling Company: New England Boring Contractors**	**Surface Comp: Flush ☐Stick Up ☐Height: 2'**
Project Number: 60139732	**Drilling Method: Direct Push Technology**	**Bentonite (bgs): NA**
Date Started Drilling: 12/4/20	**Rig Type: Geoprobe**	**Pre Pack Filter Pack (bgs): NA**
Date Finished Drilling 12/4/20	**Date Pre-Cleared: N/A**	**Riser (bgs): NA**
Location: Route 125, Rochester, NH	**Water Level While Drilling (bgs): 10.5**	**Well Scrn: Depth (bgs): NA**
Logged By: C. Howe	**Total Depth of Boring (bgs): 30.0**	***No well installed.***

(Note: bgs = below ground surface)

Depth Range (feet)	Recovery (ft/ft)	PID Depth (feet)	10.6 PID (ppm)	
0-5	3.4/5		0	SILT and SAND: 0.3 ft bgs: silty loam ft: stiff, light brown silt, some gravel and fine sand tan fine sand, some silt
5-10	3.9/5	5 7 8	2.3 0 0	SILT and SAND: 8.3 ft bgs: layers of light brown to tan silt and fine sand
10 - 15	4.0/5		0	CLAY, SILT, SAND and GRAVEL: 10 - 10.4 ft: olive gray clay 10.4 - 11.5 ft: dark brown silty fine sand 11.5 - 12.3 ft: medium gray silt, some fine sand 12.3 - 13.5 gray sand and gravel, some silt 13.5 - 14.0 ft: clean gray fine sand
15 - 20	4.5/5	17.3 - 18.6	20 - 70	CLAY, SILT, SAND and GRAVEL: 15 - 15.7 ft: silty brown clay 15.7 - 17.3 ft: medium brown silt, sand and gravel (alluvium) 17.3 - 18.3 ft: dark gray alluvium with sheen 18.3 - 18.6 ft: reddish brown alluvium, some OLM 18.6 - 19.5 ft: olive gray clay
20 - 25	5.0/5	20 - 20.9	up to 127	CLAY, SILT, SAND and GRAVEL: 20 - 20.6 ft: ft: dark gray alluvium with sheen 20.6 - 20.9 ft: dark, reddish brown alluvium with some OLM 20.9 - 25.0 ft: stiff olive gray clay
25 - 30	5.0/5		0	CLAY: 25 - 30.0 ft: same as above

End of Boring @ 30.0
Refusal Not Encountered

Ground surface approximately 10 feet above Cocheco River surface.
midway between GP-701 (D-D) and GP-907, near southern slope of RR abutment

Sample Collected	**Comments:**
19 - 21 Includes some impacted materials from above and below an intervening clay layer. Sample contained hydrophobic compounds, with reddish brown color travelling far up side of water preserved VOA vials.	NR = No Recovery ND = Non Detect NA = Not Applicable due to Hand Clearing NM = Not Measured Fill = brick/ceramic/coal/ash/wood fragments SAA = Same As Above F = Fine, M = Medium, C = Coarse, S = Sand

Appendix B Laboratory Analytical Reports

eurofins | Environment Testing New England

☑ Final Report
☐ Revised Report

Report Date:
27-Jul-20 15:52

Laboratory Report
SC58689

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Colin Callahan

Project: Unitil - Rochester, NH
Project #: 60139732 T2600

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # RI907
New York # 11393
Rhode Island # LAI00368
USDA # P330-20-00109

Authorized by:

Agnes Huntley
Project Manager

Agnes R Huntley

Eurofins Environment Testing New England holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 15 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Environment Testing New England.

Eurofins Environment Testing New England is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Environment Testing New England is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.eurofinsus.com/Spectrum for a full listing of our current certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 413-789-9018 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC58689

Project: Unitil - Rochester, NH

Project Number: 60139732 T2600

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC58689-01	GP-801(4-6)062620	Soil	26-Jun-20 08:53	29-Jun-20 18:51
SC58689-02	GP-803(3.4-5.4)062620	Soil	26-Jun-20 09:52	29-Jun-20 18:51
SC58689-03	GP-802(3.9-5.9)062620	Soil	26-Jun-20 11:15	29-Jun-20 18:51
SC58689-04	GP-709(20-22)062620	Soil	26-Jun-20 15:16	29-Jun-20 18:51
SC58689-05	GP-709(22-24)062620	Soil	26-Jun-20 15:33	29-Jun-20 18:51
SC58689-06	Trip Blank	Trip Blank	26-Jun-20 00:00	29-Jun-20 18:51

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 0.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

VOA vials preserved with deionized water were received frozen upon custody transfer to laboratory representative.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Receipt
All VOC samples were frozen by client within 48 hours. SC58689-01 (480-171912-1), SC58689-02 (480-171912-2), SC58689-03 (480-171912-3), SC58689-04 (480-171912-4), SC58689-05 (480-171912-5) and SC58689-06 (480-171912-6)

GC/MS VOA
Method 8260C: The following samples were analyzed using medium level soil analysis and diluted due to the abundance of non-target analytes: SC58689-04 (480-171912-4) and SC58689-05 (480-171912-5). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis: SC58689-06 (480-171912-6).

Method 8260C: The following sample was analyzed using medium level soil analysis and diluted due to the nature of the sample matrix: (480-171872-A-1-A). Elevated reporting limits (RLs) are provided.

GC/MS Semi VOA
Method 8270D: The following samples were diluted due to color, appearance, and viscosity: SC58689-02 (480-171912-2) and SC58689-03 (480-171912-3). Elevated reporting limits (RL) are provided.

Method 8270D: The following sample required a dilution due to the nature of the sample matrix: SC58689-02 (480-171912-2). Because of
this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Samples:

SC58689-04 *GP-709(20-22)062620*

Result exceeded calibration range.

Naphthalene

SC58689-04RE01 *GP-709(20-22)062620*

Sample was prepped or analyzed beyond the specified holding time

Naphthalene

SC58689-05 *GP-709(22-24)062620*

SW846 8260C

Samples:

SC58689-05 *GP-709(22-24)062620*

Result exceeded calibration range.

Naphthalene

SC58689-05RE01 *GP-709(22-24)062620*

Sample was prepped or analyzed beyond the specified holding time

Naphthalene

SW846 8270D

Samples:

SC58689-01 *GP-801(4-6)062620*

Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.

Benzo[b]fluoranthene

Compound was found in the blank and sample.

Phenanthrene

SC58689-02 *GP-803(3.4-5.4)062620*

Compound was found in the blank and sample.

Phenanthrene

SC58689-03 *GP-802(3.9-5.9)062620*

Compound was found in the blank and sample.

Phenanthrene

Sample Acceptance Check Form

Client: AECOM Environment - Chelmsford, MA

Project: Unitil - Rochester, NH / 60139732 T2600

Work Order: SC58689

Sample(s) received on: 6/29/2020

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples cooled on ice upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC58689-01 **Client ID:** GP-801(4-6)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzo[a]anthracene	570		220	ug/kg	SW846 8270D
Benzo[a]pyrene	530		220	ug/kg	SW846 8270D
Benzo[b]fluoranthene	870	K	220	ug/kg	SW846 8270D
Benzo[g,h,i]perylene	460		220	ug/kg	SW846 8270D
Chrysene	680		220	ug/kg	SW846 8270D
Fluoranthene	960		220	ug/kg	SW846 8270D
Indeno[1,2,3-cd]pyrene	380		220	ug/kg	SW846 8270D
Phenanthrene	660	B.	220	ug/kg	SW846 8270D
Pyrene	1300		220	ug/kg	SW846 8270D

Lab ID: SC58689-02 **Client ID:** GP-803(3.4-5.4)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzo[a]anthracene	8500		3900	ug/kg	SW846 8270D
Benzo[a]pyrene	6900		3900	ug/kg	SW846 8270D
Benzo[b]fluoranthene	12000		3900	ug/kg	SW846 8270D
Benzo[g,h,i]perylene	8800		3900	ug/kg	SW846 8270D
Benzo[k]fluoranthene	7400		3900	ug/kg	SW846 8270D
Chrysene	10000		3900	ug/kg	SW846 8270D
Fluoranthene	11000		3900	ug/kg	SW846 8270D
Indeno[1,2,3-cd]pyrene	7000		3900	ug/kg	SW846 8270D
Phenanthrene	4100	B.	3900	ug/kg	SW846 8270D
Pyrene	16000		3900	ug/kg	SW846 8270D

Lab ID: SC58689-03 **Client ID:** GP-802(3.9-5.9)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethylbenzene	9.0		6.4	ug/kg	SW846 8260C
Anthracene	3100		2000	ug/kg	SW846 8270D
Benzo[a]anthracene	11000		2000	ug/kg	SW846 8270D
Benzo[a]pyrene	8700		2000	ug/kg	SW846 8270D
Benzo[b]fluoranthene	14000		2000	ug/kg	SW846 8270D
Benzo[g,h,i]perylene	10000		2000	ug/kg	SW846 8270D
Benzo[k]fluoranthene	5800		2000	ug/kg	SW846 8270D
Chrysene	13000		2000	ug/kg	SW846 8270D
Dibenz(a,h)anthracene	2300		2000	ug/kg	SW846 8270D
Fluoranthene	14000		2000	ug/kg	SW846 8270D
Indeno[1,2,3-cd]pyrene	7600		2000	ug/kg	SW846 8270D
Phenanthrene	4700	B.	2000	ug/kg	SW846 8270D
Pyrene	21000		2000	ug/kg	SW846 8270D

Lab ID: SC58689-04 **Client ID:** GP-709(20-22)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	540000	E.	1800	ug/kg	SW846 8260C

Lab ID: SC58689-04RE01 **Client ID:** GP-709(20-22)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	480000	H	8800	ug/kg	SW846 8260C

Lab ID: SC58689-05 **Client ID:** GP-709(22-24)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	670000	E.	2100	ug/kg	SW846 8260C

Lab ID: SC58689-05RE01 **Client ID:** GP-709(22-24)062620

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	860000	H	10000	ug/kg	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-801(4-6)062620	60139732 T2600	Soil	26-Jun-20 08:53	29-Jun-20
SC58689-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FP_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 8.3		ug/kg	8.3	0.41	1	SW846 8260C	02-Jul-20 11:00	02-Jul-20 13:45	2337	539106	
100-41-4	Ethylbenzene	< 8.3		ug/kg	8.3	0.57	1	"	"	"	"	"	
179601-23-1	m-Xylene & p-Xylene	< 17		ug/kg	17	1.4	1	"	"	"	"	"	
95-47-6	o-Xylene	< 8.3		ug/kg	8.3	1.1	1	"	"	"	"	"	
108-88-3	Toluene	< 8.3		ug/kg	8.3	0.63	1	"	"	"	"	"	
	Total BTEX	< 17		ug/kg	17	8.3	1	"	"	"	"	"	
1330-20-7	Xylenes, Total	< 17		ug/kg	17	1.4	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*100*			*64-126 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*100*			*72-126 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*104*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*99*			*71-125 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method 3550C													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
91-57-6	2-Methylnaphthalene	< 220		ug/kg	220	44	1	SW846 8270D	06-Jul-20 08:14	06-Jul-20 20:26	2337	539236	
83-32-9	Acenaphthene	< 220		ug/kg	220	32	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 220		ug/kg	220	29	1	"	"	"	"	"	
120-12-7	Anthracene	< 220		ug/kg	220	55	1	"	"	"	"	"	
56-55-3	Benzo[a]anthracene	**570**		ug/kg	220	22	1	"	"	"	"	"	
50-32-8	Benzo[a]pyrene	**530**		ug/kg	220	32	1	"	"	"	"	"	
205-99-2	Benzo[b]fluoranthene	**870**	K	ug/kg	220	35	1	"	"	"	"	"	
191-24-2	Benzo[g,h,i]perylene	**460**		ug/kg	220	23	1	"	"	"	"	"	
207-08-9	Benzo[k]fluoranthene	< 220		ug/kg	220	29	1	"	"	"	"	"	
218-01-9	Chrysene	**680**		ug/kg	220	49	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 220		ug/kg	220	39	1	"	"	"	"	"	
206-44-0	Fluoranthene	**960**		ug/kg	220	23	1	"	"	"	"	"	
86-73-7	Fluorene	< 220		ug/kg	220	26	1	"	"	"	"	"	
193-39-5	Indeno[1,2,3-cd]pyrene	**380**		ug/kg	220	27	1	"	"	"	"	"	
91-20-3	Naphthalene	< 220		ug/kg	220	29	1	"	"	"	"	"	
85-01-8	Phenanthrene	**660**	B.	ug/kg	220	32	1	"	"	"	"	"	
129-00-0	Pyrene	**1,300**		ug/kg	220	26	1	"	"	"	"	"	
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*94*			*60-120 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5 (Surr)*	*89*			*53-120 %*			"	"	"	"	"	
1718-51-0	*p-Terphenyl-d14 (Surr)*	*108*			*79-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-803(3.4-5.4)062620 SC58689-02	60139732 T2600	Soil	26-Jun-20 09:52	29-Jun-20

Subcontracted Analyses

Subcontracted Analyses
Prepared by method 5035FP_Calc

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 8.3		ug/kg	8.3	0.41	1	SW846 8260C	02-Jul-20 11:00	02-Jul-20 14:11	2337	539106	
100-41-4	Ethylbenzene	< 8.3		ug/kg	8.3	0.57	1	"	"	"	"	"	
179601-23-1	m-Xylene & p-Xylene	< 17		ug/kg	17	1.4	1	"	"	"	"	"	
95-47-6	o-Xylene	< 8.3		ug/kg	8.3	1.1	1	"	"	"	"	"	
108-88-3	Toluene	< 8.3		ug/kg	8.3	0.63	1	"	"	"	"	"	
	Total BTEX	< 17		ug/kg	17	8.3	1	"	"	"	"	"	
1330-20-7	Xylenes, Total	< 17		ug/kg	17	1.4	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*101*			*64-126 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*98*			*72-126 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*108*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*101*			*71-125 %*			"	"	"	"	"	

Subcontracted Analyses
Prepared by method 3550C

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
91-57-6	2-Methylnaphthalene	< 3900		ug/kg	3900	770	20	SW846 8270D	06-Jul-20 08:14	06-Jul-20 20:50	2337	539236	
83-32-9	Acenaphthene	< 3900		ug/kg	3900	570	20	"	"	"	"	"	
208-96-8	Acenaphthylene	< 3900		ug/kg	3900	500	20	"	"	"	"	"	
120-12-7	Anthracene	< 3900		ug/kg	3900	960	20	"	"	"	"	"	
56-55-3	Benzo[a]anthracene	**8,500**		ug/kg	3900	390	20	"	"	"	"	"	
50-32-8	Benzo[a]pyrene	**6,900**		ug/kg	3900	570	20	"	"	"	"	"	
205-99-2	Benzo[b]fluoranthene	**12,000**		ug/kg	3900	620	20	"	"	"	"	"	
191-24-2	Benzo[g,h,i]perylene	**8,800**		ug/kg	3900	410	20	"	"	"	"	"	
207-08-9	Benzo[k]fluoranthene	**7,400**		ug/kg	3900	500	20	"	"	"	"	"	
218-01-9	Chrysene	**10,000**		ug/kg	3900	870	20	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 3900		ug/kg	3900	680	20	"	"	"	"	"	
206-44-0	Fluoranthene	**11,000**		ug/kg	3900	410	20	"	"	"	"	"	
86-73-7	Fluorene	< 3900		ug/kg	3900	460	20	"	"	"	"	"	
193-39-5	Indeno[1,2,3-cd]pyrene	**7,000**		ug/kg	3900	480	20	"	"	"	"	"	
91-20-3	Naphthalene	< 3900		ug/kg	3900	500	20	"	"	"	"	"	
85-01-8	Phenanthrene	**4,100**	B.	ug/kg	3900	570	20	"	"	"	"	"	
129-00-0	Pyrene	**16,000**		ug/kg	3900	460	20	"	"	"	"	"	
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*67*			*60-120 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5 (Surr)*	*56*			*53-120 %*			"	"	"	"	"	
1718-51-0	*p-Terphenyl-d14 (Surr)*	*103*			*79-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-802(3.9-5.9)062620 SC58689-03	60139732 T2600	Soil	26-Jun-20 11:15	29-Jun-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FP_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 6.4		ug/kg	6.4	0.31	1	SW846 8260C	02-Jul-20 11:00	02-Jul-20 14:36	2337	539106	
100-41-4	Ethylbenzene	**9.0**		ug/kg	6.4	0.44	1	"	"	"	"	"	
179601-23-1	m-Xylene & p-Xylene	< 13		ug/kg	13	1.1	1	"	"	"	"	"	
95-47-6	o-Xylene	< 6.4		ug/kg	6.4	0.83	1	"	"	"	"	"	
108-88-3	Toluene	< 6.4		ug/kg	6.4	0.48	1	"	"	"	"	"	
	Total BTEX	< 13		ug/kg	13	6.4	1	"	"	"	"	"	
1330-20-7	Xylenes, Total	< 13		ug/kg	13	1.1	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*102*			*64-126 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*100*			*72-126 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*105*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*98*			*71-125 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method 3550C													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
91-57-6	2-Methylnaphthalene	< 2000		ug/kg	2000	410	10	SW846 8270D	06-Jul-20 08:14	06-Jul-20 21:15	2337	539236	
83-32-9	Acenaphthene	< 2000		ug/kg	2000	300	10	"	"	"	"	"	
208-96-8	Acenaphthylene	< 2000		ug/kg	2000	260	10	"	"	"	"	"	
120-12-7	Anthracene	**3,100**		ug/kg	2000	500	10	"	"	"	"	"	
56-55-3	Benzo[a]anthracene	**11,000**		ug/kg	2000	200	10	"	"	"	"	"	
50-32-8	Benzo[a]pyrene	**8,700**		ug/kg	2000	300	10	"	"	"	"	"	
205-99-2	Benzo[b]fluoranthene	**14,000**		ug/kg	2000	320	10	"	"	"	"	"	
191-24-2	Benzo[g,h,i]perylene	**10,000**		ug/kg	2000	220	10	"	"	"	"	"	
207-08-9	Benzo[k]fluoranthene	**5,800**		ug/kg	2000	260	10	"	"	"	"	"	
218-01-9	Chrysene	**13,000**		ug/kg	2000	450	10	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	**2,300**		ug/kg	2000	360	10	"	"	"	"	"	
206-44-0	Fluoranthene	**14,000**		ug/kg	2000	220	10	"	"	"	"	"	
86-73-7	Fluorene	< 2000		ug/kg	2000	240	10	"	"	"	"	"	
193-39-5	Indeno[1,2,3-cd]pyrene	**7,600**		ug/kg	2000	250	10	"	"	"	"	"	
91-20-3	Naphthalene	< 2000		ug/kg	2000	260	10	"	"	"	"	"	
85-01-8	Phenanthrene	**4,700**	B.	ug/kg	2000	300	10	"	"	"	"	"	
129-00-0	Pyrene	**21,000**		ug/kg	2000	240	10	"	"	"	"	"	
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*87*			*60-120 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5 (Surr)*	*75*			*53-120 %*			"	"	"	"	"	
1718-51-0	*p-Terphenyl-d14 (Surr)*	*96*			*79-130 %*			"	"	"	"	"	

Sample Identification **GP-709(20-22)062620** SC58689-04	Client Project #	Matrix	Collection Date/Time	Received
	60139732 T2600	Soil	26-Jun-20 15:16	29-Jun-20

Subcontracted Analyses

Subcontracted Analyses
Prepared by method 5035FM_Calc

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 1800		ug/kg	1800	330	40	SW846 8260C	02-Jul-20 13:23	06-Jul-20 12:26	2337	539118	
91-20-3	Naphthalene	**540,000**	E.	ug/kg	1800	590	40	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*95*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*103*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*102*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*99*			*50-149 %*			"	"	"	"	"	

Re-analysis of Subcontracted Analyses
Prepared by method 5035FM_Calc

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
91-20-3	Naphthalene	**480,000**	H	ug/kg	8800	3000	200	SW846 8260C	02-Jul-20 13:23	23-Jul-20 14:15	2337	539118	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*107*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*100*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*105*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*102*			*50-149 %*			"	"	"	"	"	

Sample Identification
GP-709(22-24)062620
SC58689-05

Client Project #	Matrix	Collection Date/Time	Received
60139732 T2600	Soil	26-Jun-20 15:33	29-Jun-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 2100		ug/kg	2100	400	40	SW846 8260C	02-Jul-20 13:23	06-Jul-20 12:49	2337	539118	
91-20-3	Naphthalene	**670,000**	E.	ug/kg	2100	710	40	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*92*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*103*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*96*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*98*			*50-149 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method 5035FM_Calc													
91-20-3	Naphthalene	**860,000**	H	ug/kg	10000	3500	200	SW846 8260C	02-Jul-20 13:23	23-Jul-20 14:38	2337	539118	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*98*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*100*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*100*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*103*			*50-149 %*			"	"	"	"	"	

Sample Identification
Trip Blank
SC58689-06

Client Project #	Matrix	Collection Date/Time	Received
60139732 T2600	Trip Blank	26-Jun-20 00:00	29-Jun-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 150		ug/kg	150	29	1	SW846 8260C	02-Jul-20 13:23	06-Jul-20 11:17	2337	539118	
91-20-3	Naphthalene	< 150		ug/kg	150	51	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*93*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*105*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*92*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*103*			*50-149 %*			"	"	"	"	"	

SW846 8260C

Batch 539106 - 5035LP_Calc

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (5391061AQ)					Prepared & Analyzed: 02-Jul-20					
Toluene	**51.7**		ug/kg	5.0	50.0		103	74-128		
o-Xylene	**49.9**		ug/kg	5.0	50.0		100	70-130		
Benzene	**54.7**		ug/kg	5.0	50.0		109	79-127		
m-Xylene & p-Xylene	**52.4**		ug/kg	10	50.0		105	70-130		
Ethylbenzene	**52.7**		ug/kg	5.0	50.0		105	80-120		
Surrogate: Toluene-d8 (Surr)	*48.7*		ug/kg		*50.0*		*97*	*71-125*		
Surrogate: Dibromofluoromethane (Surr)	*52.5*		ug/kg		*50.0*		*105*	*60-140*		
Surrogate: 4-Bromofluorobenzene (Surr)	*53.1*		ug/kg		*50.0*		*106*	*72-126*		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*50.7*		ug/kg		*50.0*		*101*	*64-126*		
LCS Dup (5391062AY)			**Source: 5391061AQ**		Prepared & Analyzed: 02-Jul-20					
Toluene	**52.8**		ug/kg	5.0	50.0	51.7	106	74-128	2	20
Benzene	**56.7**		ug/kg	5.0	50.0	54.7	113	79-127	4	20
Ethylbenzene	**53.5**		ug/kg	5.0	50.0	52.7	107	80-120	1	20
m-Xylene & p-Xylene	**52.6**		ug/kg	10	50.0	52.4	105	70-130	0	20
o-Xylene	**50.8**		ug/kg	5.0	50.0	49.9	102	70-130	2	20
Surrogate: Toluene-d8 (Surr)	*49.1*		ug/kg		*50.0*		*98*	*71-125*		
Surrogate: 4-Bromofluorobenzene (Surr)	*53.9*		ug/kg		*50.0*		*108*	*72-126*		
Surrogate: Dibromofluoromethane (Surr)	*53.0*		ug/kg		*50.0*		*106*	*60-140*		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*48.6*		ug/kg		*50.0*		*97*	*64-126*		
Blank (5391063AB)					Prepared & Analyzed: 02-Jul-20					
Toluene	< 5.0		ug/kg	5.0				-		
Xylenes, Total	< 10		ug/kg	10				-		
Total BTEX	< 10		ug/kg	10				-		
o-Xylene	< 5.0		ug/kg	5.0				-		
m-Xylene & p-Xylene	< 10		ug/kg	10				-		
Ethylbenzene	< 5.0		ug/kg	5.0				-		
Benzene	< 5.0		ug/kg	5.0				-		
Surrogate: Dibromofluoromethane (Surr)	*53.2*		ug/kg		*50.0*		*106*	*60-140*		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*51.7*		ug/kg		*50.0*		*103*	*64-126*		
Surrogate: 4-Bromofluorobenzene (Surr)	*52.1*		ug/kg		*50.0*		*104*	*72-126*		
Surrogate: Toluene-d8 (Surr)	*47.6*		ug/kg		*50.0*		*95*	*71-125*		

Batch 539118 - 5035A_M_Calc

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (5391181AQ)					Prepared: 02-Jul-20 Analyzed: 06-Jul-20					
Naphthalene	**2110**		ug/kg	100	2500		85	65-142		
Benzene	**2400**		ug/kg	100	2500		96	77-125		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*2470*		ug/kg		*2500*		*99*	*53-146*		
Surrogate: 4-Bromofluorobenzene (Surr)	*2770*		ug/kg		*2500*		*111*	*49-148*		
Surrogate: Dibromofluoromethane (Surr)	*2650*		ug/kg		*2500*		*106*	*60-140*		
Surrogate: Toluene-d8 (Surr)	*2630*		ug/kg		*2500*		*105*	*50-149*		
Blank (5391182AB)					Prepared: 02-Jul-20 Analyzed: 06-Jul-20					
Naphthalene	< 100		ug/kg	100				-		
Benzene	< 100		ug/kg	100				-		
Surrogate: Dibromofluoromethane (Surr)	*2440*		ug/kg		*2500*		*97*	*60-140*		
Surrogate: 4-Bromofluorobenzene (Surr)	*2660*		ug/kg		*2500*		*106*	*49-148*		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*2260*		ug/kg		*2500*		*90*	*53-146*		
Surrogate: Toluene-d8 (Surr)	*2570*		ug/kg		*2500*		*103*	*50-149*		

SW846 8270D

Batch 539236 - 3550C

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8270D</u>										
Batch 539236 - 3550C										
<u>Blank (5392361AB)</u>					<u>Prepared & Analyzed: 06-Jul-20</u>					
Fluoranthene	< 170		ug/kg	170				-		
Anthracene	< 170		ug/kg	170				-		
Chrysene	< 170		ug/kg	170				-		
Benzo[k]fluoranthene	< 170		ug/kg	170				-		
Benzo[g,h,i]perylene	< 170		ug/kg	170				-		
Benzo[b]fluoranthene	< 170		ug/kg	170				-		
Dibenz(a,h)anthracene	< 170		ug/kg	170				-		
Fluorene	< 170		ug/kg	170				-		
Indeno[1,2,3-cd]pyrene	< 170		ug/kg	170				-		
Naphthalene	< 170		ug/kg	170				-		
Phenanthrene	< 170		ug/kg	170				-		
Benzo[a]anthracene	< 170		ug/kg	170				-		
Pyrene	< 170		ug/kg	170				-		
2-Methylnaphthalene	< 170		ug/kg	170				-		
Acenaphthene	< 170		ug/kg	170				-		
Acenaphthylene	< 170		ug/kg	170				-		
Benzo[a]pyrene	< 170		ug/kg	170				-		
Surrogate: 2-Fluorobiphenyl	*1280*		ug/kg		*1330*		*96*	*60-120*		
Surrogate: Nitrobenzene-d5 (Surr)	*1180*		ug/kg		*1330*		*88*	*53-120*		
Surrogate: p-Terphenyl-d14 (Surr)	*1610*		ug/kg		*1330*		*121*	*79-130*		
<u>LCS (5392362AQ)</u>					<u>Prepared & Analyzed: 06-Jul-20</u>					
Fluoranthene	**1780**		ug/kg	170	1660		107	62-120		
2-Methylnaphthalene	**1490**		ug/kg	170	1660		90	59-120		
Pyrene	**1940**		ug/kg	170	1660		117	61-133		
Acenaphthene	**1590**		ug/kg	170	1660		96	62-120		
Acenaphthylene	**1710**		ug/kg	170	1660		103	58-121		
Anthracene	**1780**		ug/kg	170	1660		107	62-120		
Benzo[a]anthracene	**1890**		ug/kg	170	1660		114	65-120		
Benzo[a]pyrene	**1910**		ug/kg	170	1660		115	64-120		
Indeno[1,2,3-cd]pyrene	**1950**		ug/kg	170	1660		118	56-134		
Benzo[g,h,i]perylene	**1990**		ug/kg	170	1660		120	45-145		
Phenanthrene	**1800**		ug/kg	170	1660		109	60-120		
Chrysene	**1930**		ug/kg	170	1660		116	64-120		
Dibenz(a,h)anthracene	**2010**		ug/kg	170	1660		121	54-132		
Fluorene	**1780**		ug/kg	170	1660		107	63-120		
Benzo[k]fluoranthene	**1960**		ug/kg	170	1660		118	65-120		
Naphthalene	**1340**		ug/kg	170	1660		81	55-120		
Benzo[b]fluoranthene	**1880**		ug/kg	170	1660		113	64-120		
Surrogate: Nitrobenzene-d5 (Surr)	*1090*		ug/kg		*1330*		*82*	*53-120*		
Surrogate: p-Terphenyl-d14 (Surr)	*1680*		ug/kg		*1330*		*127*	*79-130*		
Surrogate: 2-Fluorobiphenyl	*1220*		ug/kg		*1330*		*92*	*60-120*		

This laboratory report is not valid without an authorized signature on the cover page.

Notes and Definitions

B.	Compound was found in the blank and sample.
E.	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
K	Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC58689 EM

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CHAIN OF CUSTODY RECORD

Page ____ of ____

Special Handling:

☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Drive
Chelmsford, MA
Telephone #: (978) 853-1567
Project Mgr: Ryan McCarthy

Invoice To: ____________
P.O No.: ____________ Quote #: ____________

Project No: 60139732 T2600
Site Name: UNITIL Rochester
Location: Rochester, NH State: ______
Sampler(s): C. Steve. Howe

F=Field Filtered 1=Na$_2$S2O$_3$ 2=HCl 3=H$_2$SO$_4$ 4=HNO$_3$ 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=NaHSO$_4$ 9=Deionized Water 10=H$_3$PO$_4$ 11= ice 12= Freezing of DI vials

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= ________ X2= ________ X3= ________

G= Grab C=Compsite

						Containers				List Preservative Code below: 7	9	11	12					
										Analysis								
Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	BTEX 8260B	PAH 8270	SW-846-8260B Benzene and Naphthalene						Check if chlorinated
SC58689 -01	GP-801 (4-6) 062620	6/26/20	0853	G	SO	3	1			X	X							☐
-02	GP-803 (3.4-5.4) 062620	6/26/20	0952	G	SO	3	1			X	X							☐
-03	GP-802 (3.9-5.9) 062620	6/26/20	1115	G	SO	3	1			X	X							☐
-04	GP-709 (20-22) 062620	6/26/20	1516	G	SO	3		1				X						☐
-05	GP-709 (22-24) 062620	6/26/20	1533	G	SO	3		1				X						☐
06	Trip Blank					1												☐
																		☐
																		☐
																		☐
																		☐

} expedite results

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards:

Following talk with Eurofins sample/courier manager, DI vials were frozen over the weekend. Other samples held on ice

Relinquished by:	Received by:	Date:	Time:	Temp °C
C. Steve Howe AECOM	Josh Loomis AECOM	6/29/20	0818	Observed 1.3
Josh Loomis AECOM		6/29/20	~~09 40~~ 14:20	Correction Factor -1
		6/29/20	18:51	Corrected .3
				IR ID # 6

☐ EDD format: ____________
☐ E-mail to: ____________

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☑ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Batch Summary

539106

Subcontracted Analyses

5391061AQ
5391062AY
5391063AB
SC58689-01 (GP-801(4-6)062620)
SC58689-02 (GP-803(3.4-5.4)062620)
SC58689-03 (GP-802(3.9-5.9)062620)

539118

Subcontracted Analyses

5391181AQ
5391182AB
SC58689-04 (GP-709(20-22)062620)
SC58689-04RE01 (GP-709(20-22)062620)
SC58689-05 (GP-709(22-24)062620)
SC58689-05RE01 (GP-709(22-24)062620)
SC58689-06 (Trip Blank)

539236

Subcontracted Analyses

5392361AB
5392362AQ
SC58689-01 (GP-801(4-6)062620)
SC58689-02 (GP-803(3.4-5.4)062620)
SC58689-03 (GP-802(3.9-5.9)062620)

eurofins | Environment Testing
New England

☑ Final Report
☐ Revised Report

Report Date:
14-Jul-20 16:03

Laboratory Report
SC58771

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Colin Callahan

Project: Unitil - Rochester, NH
Project #: 60139732 T2600

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # RI907
New York # 11393
Rhode Island # LAI00368
USDA # P330-20-00109

Authorized by:

Agnes Huntley
Project Manager

NELAP ACCREDITED

Agnes R Huntley

Eurofins Environment Testing New England holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 16 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Environment Testing New England.

Eurofins Environment Testing New England is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Environment Testing New England is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.eurofinsus.com/Spectrum for a full listing of our current certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 413-789-9018 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC58771

Project: Unitil - Rochester, NH

Project Number: 60139732 T2600

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC58771-01	GP-706(21.5-23.5)_070120	Soil	01-Jul-20 11:15	07-Jul-20 17:00
SC58771-02	GP-701(9-11)_070120	Soil	01-Jul-20 15:00	07-Jul-20 17:00
SC58771-03	GP-705(20-22)_070120	Soil	01-Jul-20 12:50	07-Jul-20 17:00
SC58771-04	GP-713(16-18)_063020	Soil	30-Jun-20 09:45	07-Jul-20 17:00
SC58771-05	GP-711(10-12)_063020	Soil	30-Jun-20 11:30	07-Jul-20 17:00
SC58771-06	GP-710(20-22)_063020	Soil	30-Jun-20 14:40	07-Jul-20 17:00
SC58771-07	GP-707(26.8-28.8)_070120	Soil	01-Jul-20 10:00	07-Jul-20 17:00
SC58771-08	GP-704(25.2-27.2)_070220	Soil	02-Jul-20 11:45	07-Jul-20 17:00
SC58771-09	GP-702(16-18)_070220	Soil	02-Jul-20 09:40	07-Jul-20 17:00
SC58771-10	GP-703(22-24)_070220	Soil	02-Jul-20 10:30	07-Jul-20 17:00
SC58771-11	GP-702(10-12)_070220	Soil	02-Jul-20 08:30	07-Jul-20 17:00
SC58771-12	GP-712(20-22)_062920	Soil	29-Jun-20 14:30	07-Jul-20 17:00
SC58771-13	GP-708(21.7-23.7)_062920	Soil	29-Jun-20 10:57	07-Jul-20 17:00
SC58771-14	GP-708(11.9-13.9)_062920	Soil	29-Jun-20 10:26	07-Jul-20 17:00
SC58771-15	Trip Blank	Trip Blank	29-Jun-20 00:00	07-Jul-20 17:00

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 3.7 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

VOA vials preserved with deionized water were received frozen upon custody transfer to laboratory representative.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

GC/MS VOA
Method 8260C: The following samples were analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: SC58771-01 (480-172087-1), SC58771-02 (480-172087-2), SC58771-03 (480-172087-3), SC58771-05 (480-172087-5), SC58771-06 (480-172087-6), SC58771-10 (480-172087-10), SC58771-11 (480-172087-11), SC58771-12 (480-172087-12), SC58771-13 (480-172087-13) and SC58771-14 (480-172087-14). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis and diluted due to the nature of the sample matrix: SC58771-04 (480-172087-4). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was analyzed using medium level soil analysis to bring the concentration of target analytes within the calibration range: SC58771-09 (480-172087-9). Elevated reporting limits (RLs) are provided.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Acceptance Check Form

Client: AECOM Environment - Chelmsford, MA
Project: Unitil - Rochester, NH / 60139732 T2600
Work Order: SC58771
Sample(s) received on: 7/7/2020

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples cooled on ice upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☐	☑	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC58771-01 **Client ID:** GP-706(21.5-23.5)_070120

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	1700000		41000	ug/kg	SW846 8260C

Lab ID: SC58771-02 **Client ID:** GP-701(9-11)_070120

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	650000		31000	ug/kg	SW846 8260C

Lab ID: SC58771-03 **Client ID:** GP-705(20-22)_070120

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	91000		3100	ug/kg	SW846 8260C

Lab ID: SC58771-04 **Client ID:** GP-713(16-18)_063020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	4000		810	ug/kg	SW846 8260C

Lab ID: SC58771-05 **Client ID:** GP-711(10-12)_063020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	60000		2100	ug/kg	SW846 8260C

Lab ID: SC58771-06 **Client ID:** GP-710(20-22)_063020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	750000		19000	ug/kg	SW846 8260C

Lab ID: SC58771-07 **Client ID:** GP-707(26.8-28.8)_070120

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	76		3.1	ug/kg	SW846 8260C

Lab ID: SC58771-08 **Client ID:** GP-704(25.2-27.2)_070220

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	8.1		3.3	ug/kg	SW846 8260C

Lab ID: SC58771-09 **Client ID:** GP-702(16-18)_070220

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	2100		46	ug/kg	SW846 8260C

Lab ID: SC58771-10 **Client ID:** GP-703(22-24)_070220

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	200000		8500	ug/kg	SW846 8260C

Lab ID: SC58771-11 **Client ID:** GP-702(10-12)_070220

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	38000		1800	ug/kg	SW846 8260C

Lab ID: SC58771-12 **Client ID:** GP-712(20-22)_062920

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	1100000		37000	ug/kg	SW846 8260C

Lab ID: SC58771-13 **Client ID:** GP-708(21.7-23.7)_062920

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	1600000		36000	ug/kg	SW846 8260C

Lab ID: SC58771-14 **Client ID:** GP-708(11.9-13.9)_062920

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	1500000		41000	ug/kg	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-706(21.5-23.5)_070120 SC58771-01	60139732 T2600	Soil	01-Jul-20 11:15	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 41000		ug/kg	41000	7900	1000	SW846 8260C	09-Jul-20 10:29	10-Jul-20 13:29	2337	539806	
91-20-3	Naphthalene	**1,700,000**		ug/kg	41000	14000	1000	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*100*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*101*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*100*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*97*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-701(9-11)_070120 SC58771-02	60139732 T2600	Soil	01-Jul-20 15:00	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 31000		ug/kg	31000	5800	800	SW846 8260C	09-Jul-20 10:29	10-Jul-20 13:52	2337	539806	
91-20-3	Naphthalene	**650,000**		ug/kg	31000	10000	800	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*95*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*102*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*100*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*98*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-705(20-22)_070120 SC58771-03	60139732 T2600	Soil	01-Jul-20 12:50	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 3100		ug/kg	3100	600	80	SW846 8260C	09-Jul-20 10:29	10-Jul-20 14:15	2337	539806	
91-20-3	Naphthalene	**91,000**		ug/kg	3100	1100	80	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*98*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*104*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*98*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*98*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-713(16-18)_063020 SC58771-04	60139732 T2600	Soil	30-Jun-20 09:45	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 810		ug/kg	810	150	20	SW846 8260C	09-Jul-20 10:29	10-Jul-20 14:38	2337	539806	
91-20-3	Naphthalene	**4,000**		ug/kg	810	270	20	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*101*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*100*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*103*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*97*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-711(10-12)_063020 SC58771-05	60139732 T2600	Soil	30-Jun-20 11:30	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 2100		ug/kg	2100	400	40	SW846 8260C	09-Jul-20 10:29	10-Jul-20 15:01	2337	539806	
91-20-3	Naphthalene	**60,000**		ug/kg	2100	710	40	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*97*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*105*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*101*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*97*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-710(20-22)_063020 SC58771-06	60139732 T2600	Soil	30-Jun-20 14:40	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 19000		ug/kg	19000	3700	400	SW846 8260C	09-Jul-20 10:29	10-Jul-20 15:24	2337	539806	
91-20-3	Naphthalene	**750,000**		ug/kg	19000	6600	400	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*99*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*102*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*102*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*99*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-707(26.8-28.8)_070120 SC58771-07	60139732 T2600	Soil	01-Jul-20 10:00	07-Jul-20

Subcontracted Analyses

Subcontracted Analyses
Prepared by method 5035FP_Calc

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 3.1		ug/kg	3.1	0.15	1	SW846 8260C	08-Jul-20 13:00	08-Jul-20 22:15	2337	539715	
91-20-3	Naphthalene	**76**		ug/kg	3.1	0.41	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*99*			*64-126 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*114*			*72-126 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*109*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*104*			*71-125 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-704(25.2-27.2)_070220 SC58771-08	60139732 T2600	Soil	02-Jul-20 11:45	07-Jul-20

Subcontracted Analyses

Subcontracted Analyses
Prepared by method 5035FP_Calc

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 3.3		ug/kg	3.3	0.16	1	SW846 8260C	08-Jul-20 13:00	08-Jul-20 22:40	2337	539715	
91-20-3	Naphthalene	**8.1**		ug/kg	3.3	0.44	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*103*			*64-126 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*113*			*72-126 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*109*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*106*			*71-125 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-702(16-18)_070220 SC58771-09	60139732 T2600	Soil	02-Jul-20 09:40	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 46		ug/kg	46	8.7	1	SW846 8260C	09-Jul-20 10:29	11-Jul-20 15:08	2337	539806	
91-20-3	Naphthalene	**2,100**		ug/kg	46	15	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*97*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*109*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*96*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*101*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-703(22-24)_070220 SC58771-10	60139732 T2600	Soil	02-Jul-20 10:30	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 8500		ug/kg	8500	1600	80	SW846 8260C	09-Jul-20 10:29	10-Jul-20 16:11	2337	539806	
91-20-3	Naphthalene	**200,000**		ug/kg	8500	2800	80	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*101*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*101*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*101*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*97*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-702(10-12)_070220 SC58771-11	60139732 T2600	Soil	02-Jul-20 08:30	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 1800		ug/kg	1800	340	40	SW846 8260C	09-Jul-20 10:29	10-Jul-20 16:34	2337	539806	
91-20-3	Naphthalene	**38,000**		ug/kg	1800	600	40	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*100*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*111*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*100*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*103*			*50-149 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-712(20-22)_062920 SC58771-12	60139732 T2600	Soil	29-Jun-20 14:30	07-Jul-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 37000		ug/kg	37000	7000	800	SW846 8260C	09-Jul-20 10:29	10-Jul-20 16:57	2337	539806	
91-20-3	Naphthalene	**1,100,000**		ug/kg	37000	12000	800	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*96*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*100*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*98*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*96*			*50-149 %*			"	"	"	"	"	

Sample Identification

GP-708(21.7-23.7)_062920

SC58771-13

Client Project #	Matrix	Collection Date/Time	Received
60139732 T2600	Soil	29-Jun-20 10:57	07-Jul-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 36000		ug/kg	36000	6800	800	SW846 8260C	09-Jul-20 10:29	10-Jul-20 17:21	2337	539806	
91-20-3	Naphthalene	**1,600,000**		ug/kg	36000	12000	800	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*102*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*105*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*107*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*99*			*50-149 %*			"	"	"	"	"	

Sample Identification

GP-708(11.9-13.9)_062920

SC58771-14

Client Project #	Matrix	Collection Date/Time	Received
60139732 T2600	Soil	29-Jun-20 10:26	07-Jul-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FM_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 41000		ug/kg	41000	7800	1000	SW846 8260C	09-Jul-20 10:29	10-Jul-20 17:44	2337	539806	
91-20-3	Naphthalene	**1,500,000**		ug/kg	41000	14000	1000	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*96*			*53-146 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*105*			*49-148 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*102*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*99*			*50-149 %*			"	"	"	"	"	

Sample Identification **Trip Blank** SC58771-15	Client Project #	Matrix	Collection Date/Time	Received
	60139732 T2600	Trip Blank	29-Jun-20 00:00	07-Jul-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method 5035FP_Calc													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
71-43-2	Benzene	< 5.0		ug/kg	5.0	0.25	1	SW846 8260C	08-Jul-20 13:00	08-Jul-20 21:51	2337	539715	
91-20-3	Naphthalene	< 5.0		ug/kg	5.0	0.67	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4 (Surr)*	*97*			*64-126 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene (Surr)*	*111*			*72-126 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane (Surr)*	*105*			*60-140 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8 (Surr)*	*104*			*71-125 %*			"	"	"	"	"	

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 539715 - 5035LP_Calc										
LCS (5397151AQ)					Prepared & Analyzed: 08-Jul-20					
Benzene	**51.8**		ug/kg	5.0	50.0		104	79-127		
Naphthalene	**52.2**		ug/kg	5.0	50.0		104	38-137		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*49.1*		ug/kg		*50.0*		*98*	*64-126*		
Surrogate: Dibromofluoromethane (Surr)	*54.4*		ug/kg		*50.0*		*109*	*60-140*		
Surrogate: Toluene-d8 (Surr)	*52.9*		ug/kg		*50.0*		*106*	*71-125*		
Surrogate: 4-Bromofluorobenzene (Surr)	*56.3*		ug/kg		*50.0*		*113*	*72-126*		
Blank (5397152AB)					Prepared & Analyzed: 08-Jul-20					
Benzene	< 5.0		ug/kg	5.0				-		
Naphthalene	< 5.0		ug/kg	5.0				-		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*50.3*		ug/kg		*50.0*		*101*	*64-126*		
Surrogate: 4-Bromofluorobenzene (Surr)	*54.9*		ug/kg		*50.0*		*110*	*72-126*		
Surrogate: Dibromofluoromethane (Surr)	*54.2*		ug/kg		*50.0*		*108*	*60-140*		
Surrogate: Toluene-d8 (Surr)	*51.0*		ug/kg		*50.0*		*102*	*71-125*		
Batch 539806 - 5035A_M_Calc										
LCS (5398061AQ)					Prepared: 09-Jul-20 Analyzed: 10-Jul-20					
Naphthalene	**2640**		ug/kg	100	2500		106	65-142		
Benzene	**2520**		ug/kg	100	2500		101	77-125		
Surrogate: Toluene-d8 (Surr)	*2490*		ug/kg		*2500*		*100*	*50-149*		
Surrogate: Dibromofluoromethane (Surr)	*2470*		ug/kg		*2500*		*99*	*60-140*		
Surrogate: 4-Bromofluorobenzene (Surr)	*2670*		ug/kg		*2500*		*107*	*49-148*		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*2350*		ug/kg		*2500*		*94*	*53-146*		
LCS Dup (53980621AY)			**Source: 5398061AQ**		Prepared: 09-Jul-20 Analyzed: 10-Jul-20					
Naphthalene	**2690**		ug/kg	100	2500	2640	108	65-142	2	20
Benzene	**2530**		ug/kg	100	2500	2520	101	77-125	1	20
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*2400*		ug/kg		*2500*		*96*	*53-146*		
Surrogate: Dibromofluoromethane (Surr)	*2440*		ug/kg		*2500*		*97*	*60-140*		
Surrogate: Toluene-d8 (Surr)	*2530*		ug/kg		*2500*		*101*	*50-149*		
Surrogate: 4-Bromofluorobenzene (Surr)	*2660*		ug/kg		*2500*		*106*	*49-148*		
Blank (5398062AB)					Prepared: 09-Jul-20 Analyzed: 10-Jul-20					
Naphthalene	< 100		ug/kg	100				-		
Benzene	< 100		ug/kg	100				-		
Surrogate: Dibromofluoromethane (Surr)	*2430*		ug/kg		*2500*		*97*	*60-140*		
Surrogate: 4-Bromofluorobenzene (Surr)	*2510*		ug/kg		*2500*		*100*	*49-148*		
Surrogate: 1,2-Dichloroethane-d4 (Surr)	*2460*		ug/kg		*2500*		*99*	*53-146*		
Surrogate: Toluene-d8 (Surr)	*2480*		ug/kg		*2500*		*99*	*50-149*		

Notes and Definitions

dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC58771 EM

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CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:

☑ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Dr
Chelmsford MA

Telephone #: 978-853-1567

Project Mgr: Ryan McCarthy

Invoice To: ____________

P.O No.: ____________ Quote #: ____________

Project No: 60139732 T2600

Site Name: UNITIL Rochester

Location: Rochester NH State: ____

Sampler(s): ____________

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
[✓ 7=CH_3OH] 8=$NaHSO_4$ [✓ 9=Deionized Water] 10=H_3PO_4 [✓ 11=] on ice [✓ 12=] DI VOAs Frozen within 12 hrs

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No

☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= ____________ X2= ____________ X3= ____________

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	SW-846 8260B	Benzene and Naphthalene	Check if chlorinated
-01	GP-706(21.5-23.5)_070120	7/1/20	1115	G	SO	3		1		X		☐
-02	GP-701(9-11)_070120	7/1/20	1500			3		1		X		☐
-03	GP-705(20-22)_070120	7/1/20	1250			3		1		X		☐
-04	GP-713 (16-18)_063020	6/30/20	0945			3		1		X		☐
-05	GP-711(10-12)_063020	6/30/20	1130			3		1		X		☐
-06	GP-710 (20-22)_063020	6/30/20	1440			3		1		X		☐
-07	GP-707(26.8-28.8)070120	7/1/20	1000			3		1		X		☐
-08	GP-704(25.2-27.2)_070220	7/2/20	1145			3		1		X		☐
-09	GP-702 (16-18)_070220	7/2/20	0940			3		1		X		☐
-10	GP-703(22-24)-070220	7/2/20	1030			3		1		X		☐

Relinquished by:	Received by:	Date:	Time:	Temp °C
C. Stoeltow - AECOM		7/1/20	1315	Observed 4.7
		7/7/20	17:00	Correction Factor -1
				Corrected 3.7
				IR ID # 6

☐ EDD format: ____________

☐ E-mail to: ____________

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☑ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

SC58771 EM

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CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

☑ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Dr
Chelmsford MA
Telephone #: 978-853-1567
Project Mgr: Ryan McCarthy

Invoice To: ____________

P.O No.: ____________ Quote #: ____________

Project No: 60139732 T3C00
Site Name: UNITIL Rochester
Location: Rochester - NH State: ____
Sampler(s): ____________

F=Field Filtered 1=Na$_2$S2O$_3$ 2=HCl 3=H$_2$SO$_4$ 4=HNO$_3$ 5=NaOH 6=Ascorbic Acid
[✓ 7=CH3OH] 8=NaHSO$_4$ [✓ 9=Deionized Water] 10=H$_3$PO$_4$ [✓ 11=] On ice [✓ 12=] DI VOAs Frozen within 12 hrs

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= ____________ X2= ____________ X3= ____________

G= Grab C=Compsite

List Preservative Code below:

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	SW-846 8260B	Benzene and Naphthalene	Check if chlorinated
-11	GP-702(10-12)_070220	7/2/20	0830	G	SO	3		1		X		☐
-12	GP-712(20-22)_062920	6/29/20	1430	(	(	3		1		X		☐
-13	GP-708(21.7-23.7)062920	6/29/20	1057	}	}	3		1		X		☐
-14	GP-708(11.9-13.9)_062920	6/29/20	1026	(	(	3		1		X		☐
15	Trip Blank									X		☐
	Br 7/8											☐
												☐
												☐
												☐
												☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards

TB added per client. Br 7/8

Relinquished by:	Received by:	Date:	Time:	Temp °C
C. Steve Howe AECOM		7/7/20	13 15	Observed 4.7
		7/7/20	17:40	Correction Factor -1
				Corrected 3.7
				IR ID # 6

☐ EDD format: ____________

☐ E-mail to: ____________

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☑ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Batch Summary

539715

Subcontracted Analyses

5397151AQ
5397152AB
SC58771-07 (GP-707(26.8-28.8)_070120)
SC58771-08 (GP-704(25.2-27.2)_070220)
SC58771-15 (Trip Blank)

539806

Subcontracted Analyses

5398061AQ
53980621AY
5398062AB
SC58771-01 (GP-706(21.5-23.5)_070120)
SC58771-02 (GP-701(9-11)_070120)
SC58771-03 (GP-705(20-22)_070120)
SC58771-04 (GP-713(16-18)_063020)
SC58771-05 (GP-711(10-12)_063020)
SC58771-06 (GP-710(20-22)_063020)
SC58771-09 (GP-702(16-18)_070220)
SC58771-10 (GP-703(22-24)_070220)
SC58771-11 (GP-702(10-12)_070220)
SC58771-12 (GP-712(20-22)_062920)
SC58771-13 (GP-708(21.7-23.7)_062920)
SC58771-14 (GP-708(11.9-13.9)_062920)

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New England

☑ Final Report
☐ Revised Report

Report Date:
14-Dec-20 16:00

Laboratory Report
SC60122

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Colin Callahan

Project: Petrolane/Northern Utilities-Rochester, NH
Project #: 60139732.2600

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Connecticut # PH-0722
Massachusetts # RI907
New Jersey DEP - NELAP # RI008
New Hampshire # 2240
New York # 11393
Rhode Island # LAI00368
USDA # P330-20-00109

Authorized by:

Agnes Huntley
Project Manager

Agnes R Huntley

Eurofins Environment Testing New England holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 22 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Environment Testing New England.

Eurofins Environment Testing New England is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Environment Testing New England is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.eurofinsus.com/Spectrum for a full listing of our current certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 413-789-9018 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC60122

Project: Petrolane/Northern Utilities-Rochester, NH

Project Number: 60139732.2600

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC60122-01	GP-901(4-6')12-04-2020	Soil	04-Dec-20 08:30	07-Dec-20 16:00
SC60122-02	GP-902(10-12')12-03-2020	Soil	03-Dec-20 15:15	07-Dec-20 16:00
SC60122-03	GP-903(6.5-8.5')12-03-2020	Soil	03-Dec-20 14:14	07-Dec-20 16:00
SC60122-04	GP-904(9-11')12-03-2020	Soil	03-Dec-20 12:50	07-Dec-20 16:00
SC60122-05	GP-905(5-7')12-03-2020	Soil	03-Dec-20 11:00	07-Dec-20 16:00
SC60122-06	GP-906(16-18')12-04-2020	Soil	04-Dec-20 10:15	07-Dec-20 16:00
SC60122-07	GP-907(21.5-23.5')12-04-2020	Soil	04-Dec-20 11:35	07-Dec-20 16:00
SC60122-08	GP-908(17-19')12-04-2020	Soil	04-Dec-20 13:00	07-Dec-20 16:00
SC60122-09	Trip Blank	Trip Blank	04-Dec-20 00:00	07-Dec-20 16:00

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 3.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

VOA vials preserved with deionized water were received frozen upon custody transfer to laboratory representative.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Samples:

SC60122-01RE1 *GP-901(4-6')12-04-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-02 *GP-902(10-12')12-03-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-03 *GP-903(6.5-8.5')12-03-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-04RE1 *GP-904(9-11')12-03-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-05RE1 *GP-905(5-7')12-03-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-06RE1 *GP-906(16-18')12-04-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-07RE2 *GP-907(21.5-23.5')12-04-2020*

The Reporting Limit has been raised to account for matrix interference.

SC60122-08 *GP-908(17-19')12-04-2020*

The Reporting Limit has been raised to account for matrix interference.

Sample Acceptance Check Form

Client:	AECOM Environment - Chelmsford, MA
Project:	Petrolane/Northern Utilities-Rochester, NH / 60139732.2600
Work Order:	SC60122
Sample(s) received on:	12/7/2020

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	**No**	**N/A**
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC60122-01 **Client ID:** GP-901(4-6')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	21400	D	819	µg/kg	SW846 8260C

Lab ID: SC60122-01RE1 **Client ID:** GP-901(4-6')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	26000	E, D	81.9	µg/kg	SW846 8260C

Lab ID: SC60122-02 **Client ID:** GP-902(10-12')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	316000	D, E	731	µg/kg	SW846 8260C

Lab ID: SC60122-02RE1 **Client ID:** GP-902(10-12')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	407000	D	7310	µg/kg	SW846 8260C

Lab ID: SC60122-03 **Client ID:** GP-903(6.5-8.5')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	351000	E, D	868	µg/kg	SW846 8260C

Lab ID: SC60122-03RE1 **Client ID:** GP-903(6.5-8.5')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	429000	D	8680	µg/kg	SW846 8260C

Lab ID: SC60122-04 **Client ID:** GP-904(9-11')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	272000	E, D	930	µg/kg	SW846 8260C

Lab ID: SC60122-04RE1 **Client ID:** GP-904(9-11')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzene	192	D	186	µg/kg	SW846 8260C
Naphthalene	154000	E, D	186	µg/kg	SW846 8260C

Lab ID: SC60122-04RE2 **Client ID:** GP-904(9-11')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	293000	D	4650	µg/kg	SW846 8260C

Lab ID: SC60122-05 **Client ID:** GP-905(5-7')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzene	1400	D	1130	µg/kg	SW846 8260C
Naphthalene	118000	E, D	1130	µg/kg	SW846 8260C

Lab ID: SC60122-05RE1 **Client ID:** GP-905(5-7')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzene	1470	D	565	µg/kg	SW846 8260C
Naphthalene	110000	E, D	565	µg/kg	SW846 8260C

Lab ID: SC60122-05RE2 **Client ID:** GP-905(5-7')12-03-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	101000	D	2260	µg/kg	SW846 8260C

Lab ID: SC60122-06 **Client ID:** GP-906(16-18')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	64400	D	934	µg/kg	SW846 8260C

Lab ID: SC60122-06RE1 **Client ID:** GP-906(16-18')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzene	163	D	93.4	µg/kg	SW846 8260C
Naphthalene	44900	E, D	93.4	µg/kg	SW846 8260C

Lab ID: SC60122-07 **Client ID:** GP-907(21.5-23.5')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	164000	E, D	875	µg/kg	SW846 8260C

Lab ID: SC60122-07RE1 **Client ID:** GP-907(21.5-23.5')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	145000	D	2190	µg/kg	SW846 8260C

Lab ID: SC60122-07RE2 **Client ID:** GP-907(21.5-23.5')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Benzene	268	D	175	µg/kg	SW846 8260C
Naphthalene	111000	E, D	175	µg/kg	SW846 8260C

Lab ID: SC60122-08 **Client ID:** GP-908(17-19')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	364000	E, D	692	µg/kg	SW846 8260C

Lab ID: SC60122-08RE1 **Client ID:** GP-908(17-19')12-04-2020

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Naphthalene	519000	D	6920	µg/kg	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-901(4-6')12-04-2020 SC60122-01	60139732.2600	Soil	04-Dec-20 08:30	07-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 27.17 g						
71-43-2	Benzene	< 819	D	µg/kg dry	819	131	1000	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**21,400**	D	µg/kg dry	819	237	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*95*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*105*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260			R01										
Prepared by method SW846 5035A Soil (high level)							Initial weight: 27.17 g						
71-43-2	Benzene	< 81.9	D	µg/kg dry	81.9	13.1	100	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**26,000**	E, D	µg/kg dry	81.9	23.7	100	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*105*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*102*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*98*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**85.3**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-902(10-12')12-03-2020 SC60122-02	60139732.2600	Soil	03-Dec-20 15:15	07-Dec-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 R01

Prepared by method SW846 5035A Soil (high level) Initial weight: 30.35 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 731	D	µg/kg dry	731	117	1000	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**316,000**	D, E	µg/kg dry	731	212	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*107*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	

Re-analysis of Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level) Initial weight: 30.35 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 7310	D	µg/kg dry	7310	1170	10000	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**407,000**	D	µg/kg dry	7310	2120	10000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	

General Chemistry Parameters

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	% Solids	**86.3**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-903(6.5-8.5')12-03-2020 SC60122-03	60139732.2600	Soil	03-Dec-20 14:14	07-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			R01										
Prepared by method SW846 5035A Soil (high level)							Initial weight: 25.34 g						
71-43-2	Benzene	< 868	D	µg/kg dry	868	139	1000	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**351,000**	E, D	µg/kg dry	868	252	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*100*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*97*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 25.34 g						
71-43-2	Benzene	< 8680	D	µg/kg dry	8680	1390	10000	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**429,000**	D	µg/kg dry	8680	2520	10000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*95*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*102*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*105*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**85.2**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-904(9-11')12-03-2020 SC60122-04	60139732.2600	Soil	03-Dec-20 12:50	07-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 25.19 g						
71-43-2	Benzene	< 930	D	µg/kg dry	930	149	1000	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**272,000**	E, D	µg/kg dry	930	270	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*97*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*97*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260			R01										
Prepared by method SW846 5035A Soil (high level)							Initial weight: 25.19 g						
71-43-2	Benzene	**192**	D	µg/kg dry	186	29.7	200	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**154,000**	E, D	µg/kg dry	186	53.9	200	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*104*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*94*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*97*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 25.19 g						
71-43-2	Benzene	< 4650	D	µg/kg dry	4650	744	5000	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**293,000**	D	µg/kg dry	4650	1350	5000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**82.7**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

***This laboratory report is not valid without an authorized signature on the cover page*.**

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-905(5-7')12-03-2020 SC60122-05	60139732.2600	Soil	03-Dec-20 11:00	07-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 24.05 g						
71-43-2	Benzene	**1,400**	D	µg/kg dry	1130	181	1000	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**118,000**	E, D	µg/kg dry	1130	328	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*98*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*98*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*97*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260			R01										
Prepared by method SW846 5035A Soil (high level)							Initial weight: 24.05 g						
71-43-2	Benzene	**1,470**	D	µg/kg dry	565	90.4	500	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**110,000**	E, D	µg/kg dry	565	164	500	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*104*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*98*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 24.05 g						
71-43-2	Benzene	< 2260	D	µg/kg dry	2260	362	2000	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**101,000**	D	µg/kg dry	2260	656	2000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*103*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*100*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**76.2**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-906(16-18')12-04-2020 SC60122-06	60139732.2600	Soil	04-Dec-20 10:15	07-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 27.67 g						
71-43-2	Benzene	< 934	D	µg/kg dry	934	150	1000	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**64,400**	D	µg/kg dry	934	271	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260			R01										
Prepared by method SW846 5035A Soil (high level)							Initial weight: 27.67 g						
71-43-2	Benzene	**163**	D	µg/kg dry	93.4	15.0	100	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**44,900**	E, D	µg/kg dry	93.4	27.1	100	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*104*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**79.7**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification **GP-907(21.5-23.5')12-04-2020** SC60122-07	Client Project #	Matrix	Collection Date/Time	Received
	60139732.2600	Soil	04-Dec-20 11:35	07-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)							Initial weight: 26.52 g						
71-43-2	Benzene	< 875	D	µg/kg dry	875	140	1000	SW846 8260C	10-Dec-20	11-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**164,000**	E, D	µg/kg dry	875	254	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)							Initial weight: 26.52 g						
71-43-2	Benzene	< 2190	D	µg/kg dry	2190	350	2500	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**145,000**	D	µg/kg dry	2190	635	2500	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*104*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)			R01				Initial weight: 26.52 g						
71-43-2	Benzene	**268**	D	µg/kg dry	175	28.0	200	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**111,000**	E, D	µg/kg dry	175	50.8	200	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**83.5**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
GP-908(17-19')12-04-2020 SC60122-08	60139732.2600	Soil	04-Dec-20 13:00	07-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			R01										
Prepared by method SW846 5035A Soil (high level)							Initial weight: 31.56 g						
71-43-2	Benzene	< 692	D	µg/kg dry	692	111	1000	SW846 8260C	10-Dec-20	11-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	**364,000**	E, D	µg/kg dry	692	201	1000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*102*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*100*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 31.56 g						
71-43-2	Benzene	< 6920	D	µg/kg dry	6920	1110	10000	SW846 8260C	11-Dec-20	11-Dec-20	MED	2002819	X
91-20-3	Naphthalene	**519,000**	D	µg/kg dry	6920	2010	10000	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*104*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*100*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**87.2**		%			1	SM2540 G (11) Mod.	07-Dec-20	08-Dec-20	PN	2002753	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC60122-09	60139732.2600	Trip Blank	04-Dec-20 00:00	07-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 15 g						
71-43-2	Benzene	< 50.0	D	µg/kg wet	50.0	8.00	50	SW846 8260C	10-Dec-20	10-Dec-20	DDP	2002809	X
91-20-3	Naphthalene	< 50.0	D	µg/kg wet	50.0	14.5	50	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*98*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*102*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*106*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002809 - SW846 5035A Soil (high level)										
Blank (2002809-BLK1)					Prepared & Analyzed: 10-Dec-20					
Benzene	< 50.0	D	µg/kg wet	50.0						
Naphthalene	< 50.0	D	µg/kg wet	50.0						
Surrogate: 4-Bromofluorobenzene	*47.8*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*49.0*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.7*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*49.3*		µg/l		*50.0*		*99*	*70-130*		
LCS (2002809-BS1)					Prepared & Analyzed: 10-Dec-20					
Benzene	**18.8**	D	µg/l		20.0		94	70-130		
Naphthalene	**16.6**	D	µg/l		20.0		83	70-130		
Surrogate: 4-Bromofluorobenzene	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.3*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.4*		µg/l		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*50.3*		µg/l		*50.0*		*101*	*70-130*		
LCS Dup (2002809-BSD1)					Prepared & Analyzed: 10-Dec-20					
Benzene	**19.4**	D	µg/l		20.0		97	70-130	3	30
Naphthalene	**19.0**	D	µg/l		20.0		95	70-130	14	30
Surrogate: 4-Bromofluorobenzene	*49.6*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.0*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.8*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*49.6*		µg/l		*50.0*		*99*	*70-130*		
MRL Check (2002809-MRL1)					Prepared & Analyzed: 10-Dec-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.96**		µg/l		1.00		96	0-200		
Acetone	**1.72**		µg/l		1.00		172	0-200		
Acrylonitrile	**1.11**		µg/l		1.00		111	0-200		
Benzene	**0.84**		µg/l		1.00		84	0-200		
Bromobenzene	**0.87**		µg/l		1.00		87	0-200		
Bromochloromethane	**1.08**		µg/l		1.00		108	0-200		
Bromodichloromethane	**0.62**		µg/l		1.00		62	0-200		
Bromoform	**0.85**		µg/l		1.00		85	0-200		
Bromomethane	**1.61**		µg/l		1.00		161	0-200		
2-Butanone (MEK)	**1.09**		µg/l		1.00		109	0-200		
n-Butylbenzene	**0.61**		µg/l		1.00		61	0-200		
sec-Butylbenzene	**0.49**		µg/l		1.00		49	0-200		
tert-Butylbenzene	**1.18**		µg/l		1.00		118	0-200		
Carbon disulfide	**1.00**		µg/l		1.00		100	0-200		
Carbon tetrachloride	**0.84**		µg/l		1.00		84	0-200		
Chlorobenzene	**0.94**		µg/l		1.00		94	0-200		
Chloroethane	**1.20**		µg/l		1.00		120	0-200		
Chloroform	**1.38**		µg/l		1.00		138	0-200		
Chloromethane	**1.12**		µg/l		1.00		112	0-200		
2-Chlorotoluene	**0.77**		µg/l		1.00		77	0-200		
4-Chlorotoluene	**0.69**		µg/l		1.00		69	0-200		
1,2-Dibromo-3-chloropropane	**1.46**		µg/l		1.00		146	0-200		
Dibromochloromethane	**0.87**		µg/l		1.00		87	0-200		
1,2-Dibromoethane (EDB)	**0.86**		µg/l		1.00		86	0-200		
Dibromomethane	**0.95**		µg/l		1.00		95	0-200		
1,2-Dichlorobenzene	**0.93**		µg/l		1.00		93	0-200		
1,3-Dichlorobenzene	**0.84**		µg/l		1.00		84	0-200		
1,4-Dichlorobenzene	**1.08**		µg/l		1.00		108	0-200		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002809 - SW846 5035A Soil (high level)										
MRL Check (2002809-MRL1)					Prepared & Analyzed: 10-Dec-20					
Dichlorodifluoromethane (Freon12)	**0.92**		µg/l		1.00		92	0-200		
1,1-Dichloroethane	**0.94**		µg/l		1.00		94	0-200		
1,2-Dichloroethane	**1.09**		µg/l		1.00		109	0-200		
1,1-Dichloroethene	**0.87**		µg/l		1.00		87	0-200		
cis-1,2-Dichloroethene	**0.97**		µg/l		1.00		97	0-200		
trans-1,2-Dichloroethene	**1.03**		µg/l		1.00		103	0-200		
1,2-Dichloropropane	**1.10**		µg/l		1.00		110	0-200		
1,3-Dichloropropane	**0.93**		µg/l		1.00		93	0-200		
2,2-Dichloropropane	**1.01**		µg/l		1.00		101	0-200		
1,1-Dichloropropene	**0.71**		µg/l		1.00		71	0-200		
cis-1,3-Dichloropropene	**0.73**		µg/l		1.00		73	0-200		
trans-1,3-Dichloropropene	**0.75**		µg/l		1.00		75	0-200		
Ethylbenzene	**0.83**		µg/l		1.00		83	0-200		
Hexachlorobutadiene	**0.96**		µg/l		1.00		96	0-200		
2-Hexanone (MBK)	**1.18**		µg/l		1.00		118	0-200		
Isopropylbenzene	**0.51**		µg/l		1.00		51	0-200		
4-Isopropyltoluene	**1.09**		µg/l		1.00		109	0-200		
Methyl tert-butyl ether	**0.82**		µg/l		1.00		82	0-200		
4-Methyl-2-pentanone (MIBK)	**0.98**		µg/l		1.00		98	0-200		
Methylene chloride	**1.51**		µg/l		1.00		151	0-200		
Naphthalene	**1.90**		µg/l		1.00		190	0-200		
n-Propylbenzene	**0.67**		µg/l		1.00		67	0-200		
Styrene	**1.06**		µg/l		1.00		106	0-200		
1,1,1,2-Tetrachloroethane	**0.89**		µg/l		1.00		89	0-200		
1,1,2,2-Tetrachloroethane	**0.41**		µg/l		1.00		41	0-200		
Tetrachloroethene	**0.86**		µg/l		1.00		86	0-200		
Toluene	**0.96**		µg/l		1.00		96	0-200		
1,2,3-Trichlorobenzene	**0.85**		µg/l		1.00		85	0-200		
1,2,4-Trichlorobenzene	**0.90**		µg/l		1.00		90	0-200		
1,3,5-Trichlorobenzene	**0.86**		µg/l		1.00		86	0-200		
1,1,1-Trichloroethane	**0.96**		µg/l		1.00		96	0-200		
1,1,2-Trichloroethane	**1.00**		µg/l		1.00		100	0-200		
Trichloroethene	**1.11**		µg/l		1.00		111	0-200		
Trichlorofluoromethane (Freon 11)	**0.86**		µg/l		1.00		86	0-200		
1,2,3-Trichloropropane	**0.92**		µg/l		1.00		92	0-200		
1,2,4-Trimethylbenzene	**0.44**		µg/l		1.00		44	0-200		
1,3,5-Trimethylbenzene	**0.56**		µg/l		1.00		56	0-200		
Vinyl chloride	**0.87**		µg/l		1.00		87	0-200		
m,p-Xylene	**0.74**		µg/l		1.00		74	0-200		
o-Xylene	**0.61**		µg/l		1.00		61	0-200		
Tetrahydrofuran	**1.18**		µg/l		1.00		118	0-200		
Ethyl ether	**0.98**		µg/l		1.00		98	0-200		
Tert-amyl methyl ether	**0.82**		µg/l		1.00		82	0-200		
Ethyl tert-butyl ether	**0.76**		µg/l		1.00		76	0-200		
Di-isopropyl ether	**0.77**		µg/l		1.00		77	0-200		
Tert-Butanol / butyl alcohol	**12.5**		µg/l		10.0		125	0-200		
1,4-Dioxane	**7.47**		µg/l		10.0		75	0-200		
trans-1,4-Dichloro-2-butene	**0.90**		µg/l		1.00		90	0-200		
Ethanol	**21.5**		µg/l		20.0		107	0-200		
Surrogate: 4-Bromofluorobenzene	*48.0*		µg/l		*50.0*		*96*	*70-130*		

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Volatile Organic Compounds - Quality Control

SW846 8260C

Batch 2002809 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MRL Check (2002809-MRL1)					Prepared & Analyzed: 10-Dec-20					
Surrogate: Toluene-d8	*50.1*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.7*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*51.0*		µg/l		*50.0*		*102*	*70-130*		
MRL Check (2002809-MRL2)					Prepared & Analyzed: 10-Dec-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**2.14**		µg/l		2.00		107	0-200		
Acetone	**2.79**		µg/l		2.00		140	0-200		
Acrylonitrile	**2.26**		µg/l		2.00		113	0-200		
Benzene	**1.67**		µg/l		2.00		84	0-200		
Bromobenzene	**1.73**		µg/l		2.00		86	0-200		
Bromochloromethane	**1.92**		µg/l		2.00		96	0-200		
Bromodichloromethane	**1.64**		µg/l		2.00		82	0-200		
Bromoform	**1.84**		µg/l		2.00		92	0-200		
Bromomethane	**2.20**		µg/l		2.00		110	0-200		
2-Butanone (MEK)	**2.39**		µg/l		2.00		120	0-200		
n-Butylbenzene	**1.31**		µg/l		2.00		66	0-200		
sec-Butylbenzene	**1.17**		µg/l		2.00		58	0-200		
tert-Butylbenzene	**1.71**		µg/l		2.00		86	0-200		
Carbon disulfide	**1.99**		µg/l		2.00		100	0-200		
Carbon tetrachloride	**2.03**		µg/l		2.00		102	0-200		
Chlorobenzene	**1.91**		µg/l		2.00		96	0-200		
Chloroethane	**1.85**		µg/l		2.00		92	0-200		
Chloroform	**2.23**		µg/l		2.00		112	0-200		
Chloromethane	**2.29**		µg/l		2.00		114	0-200		
2-Chlorotoluene	**1.46**		µg/l		2.00		73	0-200		
4-Chlorotoluene	**1.42**		µg/l		2.00		71	0-200		
1,2-Dibromo-3-chloropropane	**2.31**		µg/l		2.00		116	0-200		
Dibromochloromethane	**1.83**		µg/l		2.00		92	0-200		
1,2-Dibromoethane (EDB)	**1.73**		µg/l		2.00		86	0-200		
Dibromomethane	**2.03**		µg/l		2.00		102	0-200		
1,2-Dichlorobenzene	**1.92**		µg/l		2.00		96	0-200		
1,3-Dichlorobenzene	**1.67**		µg/l		2.00		84	0-200		
1,4-Dichlorobenzene	**2.06**		µg/l		2.00		103	0-200		
Dichlorodifluoromethane (Freon12)	**2.16**		µg/l		2.00		108	0-200		
1,1-Dichloroethane	**1.98**		µg/l		2.00		99	0-200		
1,2-Dichloroethane	**2.21**		µg/l		2.00		110	0-200		
1,1-Dichloroethene	**1.80**		µg/l		2.00		90	0-200		
cis-1,2-Dichloroethene	**1.83**		µg/l		2.00		92	0-200		
trans-1,2-Dichloroethene	**1.90**		µg/l		2.00		95	0-200		
1,2-Dichloropropane	**1.84**		µg/l		2.00		92	0-200		
1,3-Dichloropropane	**1.76**		µg/l		2.00		88	0-200		
2,2-Dichloropropane	**1.97**		µg/l		2.00		98	0-200		
1,1-Dichloropropene	**1.57**		µg/l		2.00		78	0-200		
cis-1,3-Dichloropropene	**1.37**		µg/l		2.00		68	0-200		
trans-1,3-Dichloropropene	**1.61**		µg/l		2.00		80	0-200		
Ethylbenzene	**1.79**		µg/l		2.00		90	0-200		
Hexachlorobutadiene	**1.88**		µg/l		2.00		94	0-200		
2-Hexanone (MBK)	**2.06**		µg/l		2.00		103	0-200		
Isopropylbenzene	**1.12**		µg/l		2.00		56	0-200		
4-Isopropyltoluene	**1.61**		µg/l		2.00		80	0-200		
Methyl tert-butyl ether	**1.52**		µg/l		2.00		76	0-200		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002809 - SW846 5035A Soil (high level)										
MRL Check (2002809-MRL2)					Prepared & Analyzed: 10-Dec-20					
4-Methyl-2-pentanone (MIBK)	**1.48**		µg/l		2.00		74	0-200		
Methylene chloride	**2.43**		µg/l		2.00		122	0-200		
Naphthalene	**2.15**		µg/l		2.00		108	0-200		
n-Propylbenzene	**1.50**		µg/l		2.00		75	0-200		
Styrene	**1.53**		µg/l		2.00		76	0-200		
1,1,1,2-Tetrachloroethane	**1.82**		µg/l		2.00		91	0-200		
1,1,2,2-Tetrachloroethane	**1.60**		µg/l		2.00		80	0-200		
Tetrachloroethene	**1.80**		µg/l		2.00		90	0-200		
Toluene	**1.91**		µg/l		2.00		96	0-200		
1,2,3-Trichlorobenzene	**1.46**		µg/l		2.00		73	0-200		
1,2,4-Trichlorobenzene	**1.61**		µg/l		2.00		80	0-200		
1,3,5-Trichlorobenzene	**1.73**		µg/l		2.00		86	0-200		
1,1,1-Trichloroethane	**1.93**		µg/l		2.00		96	0-200		
1,1,2-Trichloroethane	**1.95**		µg/l		2.00		98	0-200		
Trichloroethene	**2.00**		µg/l		2.00		100	0-200		
Trichlorofluoromethane (Freon 11)	**2.06**		µg/l		2.00		103	0-200		
1,2,3-Trichloropropane	**2.05**		µg/l		2.00		102	0-200		
1,2,4-Trimethylbenzene	**1.15**		µg/l		2.00		58	0-200		
1,3,5-Trimethylbenzene	**1.23**		µg/l		2.00		62	0-200		
Vinyl chloride	**1.89**		µg/l		2.00		94	0-200		
m,p-Xylene	**1.41**		µg/l		2.00		70	0-200		
o-Xylene	**1.22**		µg/l		2.00		61	0-200		
Tetrahydrofuran	**1.99**		µg/l		2.00		100	0-200		
Ethyl ether	**1.98**		µg/l		2.00		99	0-200		
Tert-amyl methyl ether	**1.56**		µg/l		2.00		78	0-200		
Ethyl tert-butyl ether	**1.50**		µg/l		2.00		75	0-200		
Di-isopropyl ether	**1.60**		µg/l		2.00		80	0-200		
Tert-Butanol / butyl alcohol	**21.6**		µg/l		20.0		108	0-200		
1,4-Dioxane	**16.3**		µg/l		20.0		82	0-200		
trans-1,4-Dichloro-2-butene	**1.99**		µg/l		2.00		100	0-200		
Ethanol	**40.8**		µg/l		40.0		102	0-200		
Surrogate: 4-Bromofluorobenzene	*47.9*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*48.9*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.0*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*49.6*		µg/l		*50.0*		*99*	*70-130*		
Batch 2002819 - SW846 5035A Soil (high level)										
Blank (2002819-BLK1)					Prepared & Analyzed: 11-Dec-20					
Benzene	< 50.0	D	µg/kg wet	50.0						
Naphthalene	< 50.0	D	µg/kg wet	50.0						
Surrogate: 4-Bromofluorobenzene	*48.8*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.1*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*50.4*		µg/l		*50.0*		*101*	*70-130*		
LCS (2002819-BS1)					Prepared & Analyzed: 11-Dec-20					
Benzene	**18.2**	D	µg/l		20.0		91	70-130		
Naphthalene	**21.5**	D	µg/l		20.0		108	70-130		
Surrogate: 4-Bromofluorobenzene	*50.3*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*50.3*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.2*		µg/l		*50.0*		*98*	*70-130*		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

SW846 8260C

Batch 2002819 - SW846 5035A Soil (high level)

LCS (2002819-BS1) Prepared & Analyzed: 11-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: Dibromofluoromethane	*50.1*		µg/l		*50.0*		*100*	*70-130*		

LCS Dup (2002819-BSD1) Prepared & Analyzed: 11-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Benzene	**18.7**	D	µg/l		20.0		93	70-130	3	30
Naphthalene	**22.2**	D	µg/l		20.0		111	70-130	3	30
Surrogate: 4-Bromofluorobenzene	*51.1*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*50.0*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*50.0*		µg/l		*50.0*		*100*	*70-130*		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SM2540 G (11) Mod.										
Batch 2002753 - General Preparation										
Duplicate (2002753-DUP1)			**Source: SC60122-01**		Prepared: 07-Dec-20 Analyzed: 08-Dec-20					
% Solids	**86.0**		%			85.3			0.7	5
Duplicate (2002753-DUP2)			**Source: SC60122-02**		Prepared: 07-Dec-20 Analyzed: 08-Dec-20					
% Solids	**86.1**		%			86.3			0.3	5

Notes and Definitions

D	Data reported from a dilution
E	This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.
R01	The Reporting Limit has been raised to account for matrix interference.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC60122 Bry

eurofins Environment Testing New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☑ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: AECOM
250 Appollo Drive
Chelmsford, MA 01824

Telephone #: 978-905-2100

Project Mgr: Colin Callahan

Invoice To: ← Same

P.O No.: ____________ Quote #: ____________

Project No: 60139732.2600

Site Name: Petrolane/Northern Utilities, Inc.

Location: Rochester, ~~NH~~ State: NH

Sampler(s): Charles Steve Howe
Marissa Carvalho

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=____ 12=____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=____ X2=____ X3=____

G= Grab C=Compsite

List Preservative Code below: 7 9

						Containers					Analysis								
Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		8260	8270							Check if chlorinated
SC60122.01	GP-901(4-6')12-04-2020	12/4/2020	8:30	C	SO	3	1				X	X							☐
02	GP-902(10-12')12-03-2020	12/3/2020	15:15	↓	↓	3	1				X	X							☐
03	GP-903(6.5-8.5')12-03-2020	12/3/2020	14:14			3	1				X	X							☐
04	GP-404(9-11')12-03-2020	12/3/2020	12:50			3	1				X	X							☐
05	GP-905(5-7')12-03-2020	12/3/2020	11:00			3	1				X	X							☐
06	GP-906(16-18)12-04-2020	12/4/2020	10:15			3	1				X	X							☐
07	GP-907(21.5-23.5)12-04-20	12/4/2020	11:35			3	1				X	X							☐
08	GP-908(17-19)12-04-2020	12/4/2020	13:00	↓	↓	3	1				X	X							☐
09	Trip Blank	LAB	LAB								X	X							☐
																			☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☑ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
Marissa Carvalho	David Dee	12/4/2020	12:03	Observed 23
David Dee		12/4/20	16:00	Corecction Factor +1
				Corrected 33
				IR ID # 6

☑ EDD format: AECOM Equis

☑ E-mail to: colin.callahan@aecom.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☐ Iced ☒ Refrigerated ☒ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

SC60122 Bn

eurofins

Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☑ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: AECOM
250 Apollo Drive
Chelmsford, MA 01824

Telephone #: 978-905-2100
Project Mgr: Colin Callahan

Invoice To: ← Same

P.O No.: ____________ Quote #: ____________

Project No: 60139732.2600
Site Name: Petrolane/Northern Utilities, Inc.
Location: Rochester, ~~NH~~ State: NH
Sampler(s): Charles Steve Howe
Marissa Carvalho

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=________ 12=________

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=________ X2=________ X3=________

G= Grab C=Compsite

List Preservative Code below: 7 9

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8260 *	~~8270~~ Bn 12/8							Check if chlorinated	
SC60122-01	GP-901(4-6')12-04-2020	12/4/2020	8:30	C	SO	3	1			X	X							☐	* Benzene and
02	GP-902(10-12')12-03-2020	12/3/2020	15:15	↓	↓	3	1			X	X							☐	Naphthalene only
03	GP-903(6.5-8.5')12-03-2020	12/3/2020	14:14			3	1			X	X							☐	per client.
04	GP-404(9-11')12-03-2020	12/3/2020	12:50			3	1			X	X							☐	Bn 12/8
05	GP-905(5-7')12-03-2020	12/3/2020	11:00			3	1			X	X							☐	
06	GP-906(16-18)12-04-2020	12/4/2020	10:15			3	1			X	X							☐	8270 Cancelled
07	GP-907(21.5-23.5)12-04-20	12/4/2020	11:35			3	1			X	X							☐	per client.
08	GP-908(17-19)12-04-2020	12/4/2020	13:00	↓	↓	3	1			X	X							☐	Bn 12/8
09	Trip Blank	LAB	LAB							X	X							☐	
																		☐	

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☑ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
Marissa Carvalho	Dante Dee	12/4/2020	12:03	Observed 2 3
Dante Dee		12/7/20	16:00	Corecction Factor +1
				Corrected 3 3
				IR ID # 6

☑ EDD format: AECOM Equis
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Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
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Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

646 Camp Ave
North Kingstown, RI 02852
(413) 789-9018

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	*Client ID*	*Analysis*	*Added*
SC60122-01	GP-901(4-6')12-04-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-02	GP-902(10-12')12-03-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-03	GP-903(6.5-8.5')12-03-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-04	GP-904(9-11')12-03-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-05	GP-905(5-7')12-03-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-06	GP-906(16-18')12-04-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-07	GP-907(21.5-23.5')12-04-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-08	GP-908(17-19')12-04-2020	Volatile Organic Compounds by SW846 8260	12/9/2020
SC60122-09	Trip Blank	Volatile Organic Compounds by SW846 8260	12/9/2020

Batch Summary

2002753

General Chemistry Parameters

2002753-DUP1
2002753-DUP2
SC60122-01 (GP-901(4-6')12-04-2020)
SC60122-02 (GP-902(10-12')12-03-2020)
SC60122-03 (GP-903(6.5-8.5')12-03-2020)
SC60122-04 (GP-904(9-11')12-03-2020)
SC60122-05 (GP-905(5-7')12-03-2020)
SC60122-06 (GP-906(16-18')12-04-2020)
SC60122-07 (GP-907(21.5-23.5')12-04-2020)
SC60122-08 (GP-908(17-19')12-04-2020)

2002809

Volatile Organic Compounds

2002809-BLK1
2002809-BS1
2002809-BSD1
2002809-MRL1
2002809-MRL2
SC60122-01 (GP-901(4-6')12-04-2020)
SC60122-02 (GP-902(10-12')12-03-2020)
SC60122-03 (GP-903(6.5-8.5')12-03-2020)
SC60122-04 (GP-904(9-11')12-03-2020)
SC60122-05 (GP-905(5-7')12-03-2020)
SC60122-06 (GP-906(16-18')12-04-2020)
SC60122-07 (GP-907(21.5-23.5')12-04-2020)
SC60122-08 (GP-908(17-19')12-04-2020)
SC60122-09 (Trip Blank)

2002819

Volatile Organic Compounds

2002819-BLK1
2002819-BS1
2002819-BSD1
SC60122-01RE1 (GP-901(4-6')12-04-2020)
SC60122-02RE1 (GP-902(10-12')12-03-2020)
SC60122-03RE1 (GP-903(6.5-8.5')12-03-2020)
SC60122-04RE1 (GP-904(9-11')12-03-2020)
SC60122-04RE2 (GP-904(9-11')12-03-2020)
SC60122-05RE1 (GP-905(5-7')12-03-2020)
SC60122-05RE2 (GP-905(5-7')12-03-2020)
SC60122-06RE1 (GP-906(16-18')12-04-2020)
SC60122-07RE1 (GP-907(21.5-23.5')12-04-2020)
SC60122-07RE2 (GP-907(21.5-23.5')12-04-2020)
SC60122-08RE1 (GP-908(17-19')12-04-2020)

NHDES-S-02-018

NHDES Waste Management Division
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095

SOIL MANAGEMENT REPORT SUBMITTAL
Petrolane/Northern Utilities, Inc. Site
Route 125
Rochester, NH 03867

NHDES Site #: 198712002
Project Type: Hazardous Waste Project
Project Number: 0432

Prepared For:
Unitil Service Corp.
6 Liberty Lane W
Hampton, NH 03842-1720
Phone Number (603) 379-3829
RP Contact Name: Thomas Murphy
RP Contact Email: murphyt@unitil.com

STATE OF NEW HAMPSHIRE
JOSHUA C. MILLARD
No. 812
LICENSED
PROFESSIONAL GEOLOGIST

Digitally signed by Millard, Joshua
DN: cn=Millard, Joshua, c=US, o=AECOM, ou=USCHL1, email=joshua.millard@aecom.com
Date: 2021.10.14 12:22:18 -04'00'

Prepared By:
AECOM Technical Services, Inc.
250 Apollo Drive.
Chelmsford, MA 01824
Phone Number: (978) 905-2100
Contact Name: Ryan McCarthy
Contact Email: ryan.mccarthy@aecom.com

Date of Report: October 12, 2021

AECOM

Soil Management Report
Utility Upgrade Project

Petrolane/Northern Utilities, Inc. Site
Route 125, Rochester, NH

October 12, 2021

Delivering a better world

Quality information

Prepared by	Reviewed by	Approved by
Colin Callahan Scientist	Mark McCabe Senior Scientist	Ryan McCarthy Project Manager

Prepared for:

Unitil Service Corporation
Hampton, NH

Prepared by:

AECOM Technical Services, Inc.
250 Apollo Drive
Chelmsford, MA 01824

Table of Contents

Appendices

Figures

Tables

1. Introduction

The Petrolane Site (Site) is located at the intersection of Route 125 and the Spaulding Turnpike in Rochester, New Hampshire. The Site is bounded by Axe Handle Brook to the north, the Cocheco River to the east, and roadways on the west and south (Figure 1-1). The former Rochester Manufactured Gas Plant (MGP) facility operated in the western portion of the Site from 1903 through 1957.

Unitil, d/b/a Northern Utilities (Northern), is constructing a new natural gas regulating station on the Site to support a similar facility that has existed on the property since 1991. The utility upgrade is part of a multi-year plan to reinforce the existing natural gas network serving customers in the City of Rochester.

In support of The Notice of Activity and Use Restriction (AUR) for the Site (Sept. 12, 2002), Unitil provided notification to the New Hampshire Department of Environmental Services (NHDES) of activities that had the potential to disturb soil. The Soil Management Plan Utility Upgrade Project, dated July 29, 2020 provided information to ensure the following:

- that workers would be adequately protected in accordance with applicable health and safety regulations; and
- that disturbed media would be managed in accordance with applicable federal and NHDES standards.

This Soil Management Report documents the activities conducted to comply with the requirements of the AUR. It is organized as follows: the scope of the utility construction project is summarized in Section 2; the proposed health and safety protocols are detailed in Section 3; information on the nature and quantities of waste generated during construction is provided in Section 4; and references used in the preparation of this document are presented in Section 5. Documentation associated with the management of wastes is presented in the Appendices.

2. Facility Construction

The new regulator station will be constructed in a 35-foot by 80-foot area located adjacent to Rte. 125 (Figure 2-1). Above ground piping for the facility is supported by a slab on grade pad. The associated below ground piping for the station was installed at depth of 3 to 4 ft. bgs.

Unitil used a Horizontal Directional Drill (HDD) to connect the proposed station to a 12-inch steel gas main extension located on property owned by the City of Rochester on Old Dover Road (Tax Map 137, Lot 76). The property is currently used as a public recreational facility, i.e., a ballfield. The HDD was 530 feet in length (distance between entry/exit pits) and crossed under the Cocheco River at a depth of 14 feet below the top of sediment.

As illustrated in the Figure, entry and exit pits for the HDD were excavated on the Northern and City of Rochester properties, respectively. The drill rig was setup at the entry pit and drilled the pilot hole to the exit pit. Photographs of the entry and exit pits are provide in Figure 2-2. HDD activities were conducted during the period from December 18 to December 21, 2020.

3. Worker Health and Safety

All work was conducted in accordance with site-specific health and safety plans (HASPs) related to the Site and associated MGP impacts, as well as work-related documents developed by the contractors conducting the excavation, drilling and waste management activities. The following companies were involved in the soil management activities:

- Unitil – Project Management
- Henniker Directional Drilling – Horizontal Directional Drilling
- Neuco – Excavation and Pipe Assembly
- US Ecology – Waste Management
- AECOM – Environmental Oversight

The HASPs conformed to the regulatory requirements and guidelines established in the following references:

- Title 29, Part 1910 of the Code of Federal Regulations (29 CFR 1910), Occupational Safety and Health Standards (with special attention to Section 120, Hazardous Waste Operations and Emergency Response).
- Title 8 of the California Code of Regulations (8 CCR), with special attention to Section 5192 Hazardous Waste Operations and Emergency Response, and Section 3202, Injury Illness Prevention Program.
- 29 CFR 1926, Safety and Health Regulations for Construction.
- 8 CCR, with special attention to Sub Chapter 4, Sections 1500 - 1938 Construction Safety Orders.
- National Institute for Occupational Safety and Health/Occupational Safety and Hazards Administration/U.S. Coast Guard/U.S. Environmental Protection Agency, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, Publication No. 85-115, 1985.

Exclusion zones were established around the disturbed areas and access was limited to OSHA-trained staff that were enrolled in a certified medical surveillance programs and wearing the appropriate personal protection equipment (PPE), typically Level D. Workspace air monitoring documented that the use of Level D personal protection equipment (PPE) was appropriate for site workers.

Additionally, site workers were required to comply with Unitil's COVID19 protocols that included a daily attestation to fitness to work, use of face coverings, disinfection/cleaning of equipment/vehicles, and social distancing to the extent practical.

4. Waste Management

The upgrade of the regulator station generated drilling fluids/spoils from the HDD and soil from the installation of equipment/piping. The following sections discuss the nature, quantities, and management of these materials.

4.1 Horizontal Directional Drill

The directional drilling process uses a nonhazardous drilling fluid made up of primarily water and bentonite (de-hydrated clay). The drilling fluid is used to remove cuttings from the hole, lubricate and cool the bit/drilling assembly, stabilize the hole, suspend drilled cuttings during static periods, and transmit hydraulic energy to the bit. The work progressed at a rate that allowed the spoils/fluids to be contained within the drill hole and entry/exit pits throughout the process.

The HDD traversed the Site at a depth of approximately 4 ft bgs (entry pit) to 20 ft bgs (riverbank). Observations at the depth the HDD intersected the geotechnical boring locations, 5 ft bgs and 19 ft bgs, respectively indicated that the soil is primarily sand and gravel. The observed MGP impacts at these locations/depths were limited to odor. Limited observations of sheen in the entry pit spoils indicated that the HDD passed through an outer portion of the MGP source area at a depth of approximately 12 ft bgs.

4.1.1 HDD Waste Management and Disposal

Soil in the area of the entry pit was characterized prior to mobilization of the HDD. The results are provided in Table 4-1. The analytical reports from the characterization of soil samples are provided in Appendix A. Soil from the excavation of the entry pit (166 tons) was transported to Clean Earth, Loudon, NH during the period from December 29, 2020 to January 15, 2021.

The drilling mud contained in the entry/exit pits were pumped directly to enclosed tanks (Figure 4-1). The results of representative samples of drilling fluids/spoils collected from the entry and exit pits are presented in Table 4-2. The analytical reports from the characterization of the drilling muds are provided in Appendix B. The collected waste (33 tons) was transported to the Tradebe Treatment and Recycling facility in Newington, NH for solidification and disposal during the period from January 2, 2021 to January 15, 2021. A summary of the waste shipments is provided in Table 4-3. The associated documentation is provided in Appendix C.

4.2 Regulator Station Piping

The installation of the piping for the regulator station piping was installed in several mobilizations during the period of April 7th to August 19th. The trench for the piping had the approximate dimensions of 650 ft. (L), 3 ft. (W) and 4 ft. (D). The excavation for the trench, associated structures, and station pad generated 976 c.y. (1,562 tons) of soil. The soil was loaded directly to lined and covered roll-off boxes for transport (Figure 4-2).

Disturbed areas were restored and the base of the regulator station was constructed as slab on grade (Figure 4-3)

5. References

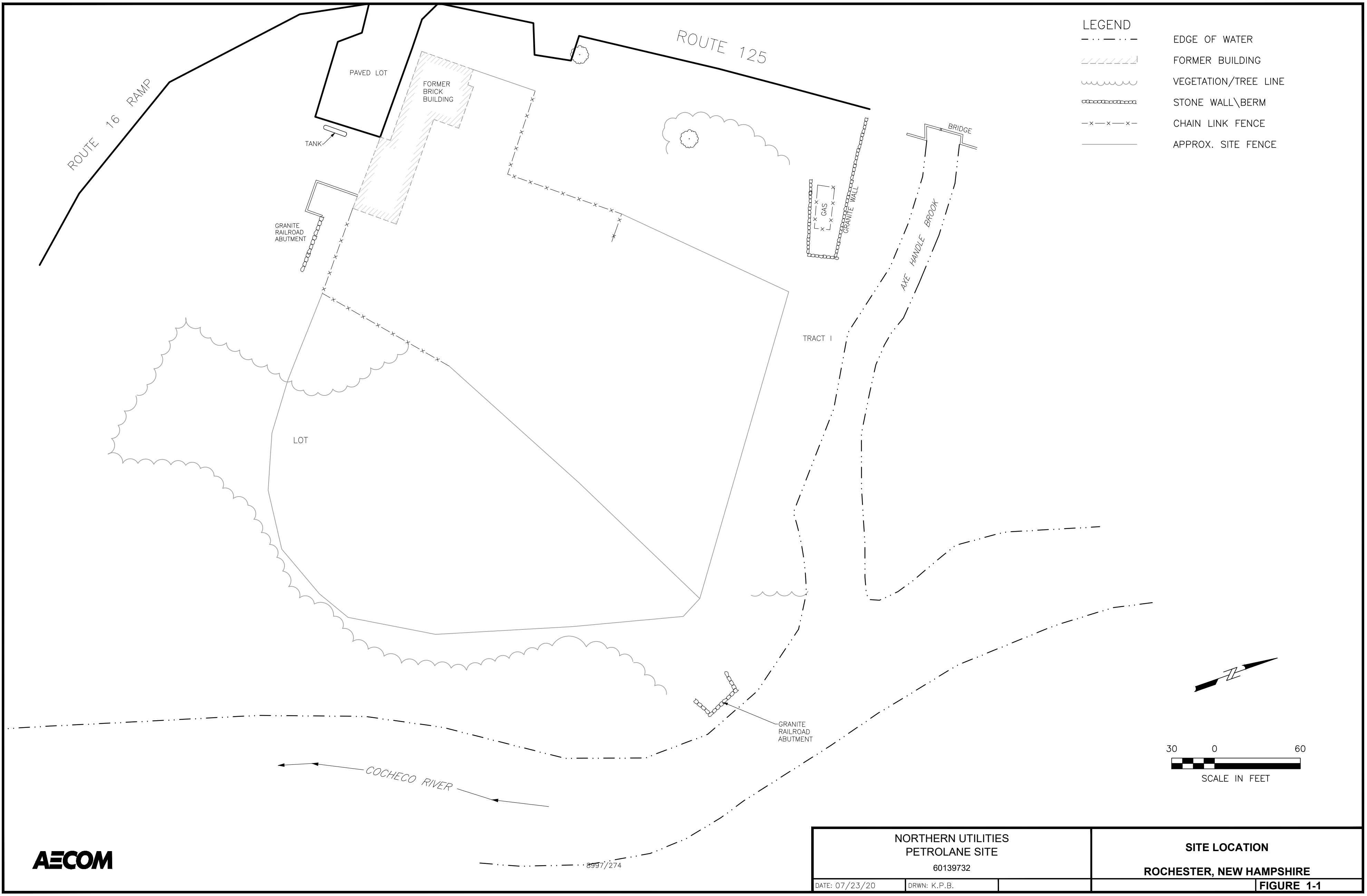
AECOM, 2009 The Soil Management Plan Utility Upgrade Project, July 29, 2020

HLA, 1999. Phase II and IIA Site Investigation Report, Former Rochester MGP Site, Rochester, New Hampshire. February 1999.

RETEC, 2001. Completion Report, Former Manufactured Gas Plant, Source Removal Action, Rochester, New Hampshire. April 2001.

RETEC, 2004a. Completion Report Addendum Source Removal Action, Former Manufactured Gas Plant, Rochester, New Hampshire. June 2004.

Figures



NORTHERN UTILITIES
PETROLANE SITE
60139732

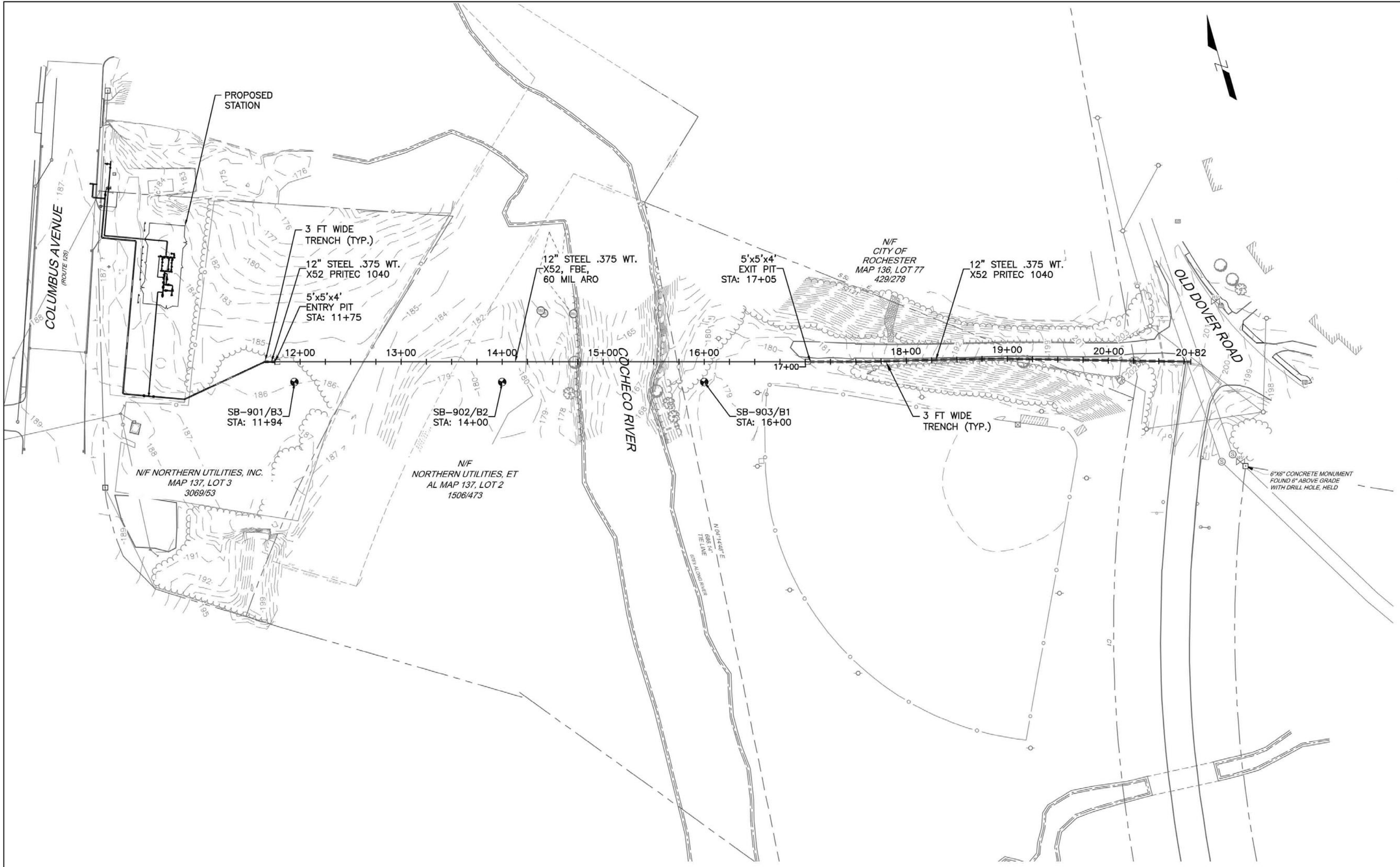
DATE: 07/23/20
DRWN: K.P.B.

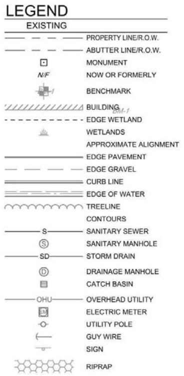
SITE LOCATION

ROCHESTER, NEW HAMPSHIRE

FIGURE 1-1

File: C:\Users\BarryK\Documents\Northern Utilities - Rochester NH\60139732 7-23-20.dwg Layout: Fig 1-1 User: BarryK Plotted: Jul 23, 2020 - 6:28pm Xref's:





REV	BY	DATE	DESCRIPTION

DWG NO.	REFERENCE DRAWINGS

	PRJ MANAGER: MARK D. WOOD
	PRJ ENGINEER: DAVID B. HOGUE
	PRJ NAME: ROUTE 125 STATION HDD
	PRJ NUMBER: 5403
	PRJ MILESTONE:
	PRJ PHASE:
	DESIGNED BY: DBH –
	DRAFTED BY: DBH –
	CHECKED BY: SMR –
SEAL AND SIGNATURE	APPROVED BY: MDW –

CLIENT INFORMATION

Unitil
Northern Utilities, Inc.

DESIGN MANAGER: T. BICKFORD	REVIEWED BY:
DESIGN ENGINEER: M. DUNN	CHECKED BY:
ACTIVATION ORDER:	APPROVED BY:

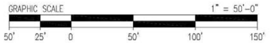
SHEET TITLE:
STATION AND HDD OVERVIEW

PROJECT NAME:
ROUTE 125
STATION HDD

PROJECT LOCATION:
ROCHESTER, NH

PROCESS PIPELINE SERVICES
4 Broad Street
Plainville, MA 02762
781.829.0524
processpipelineservices.com

Figure 2-1



FILE NAME: 5403 HDD OVERVIEW.DWG	SIZE	NAME	REV
PLOT DATE: 7/29/2020 3:32 PM	22X34	C01	
SCALE: 1" = 50'-0"	SHEET 1 OF 1		

Entry Pit

Exit Pit

AECOM

UNITIL CORPORATION
ROCHESTER MGP UTILITY UPGRADE PROJECT

ENTRY AND EXIT PITS

FIGURE 2-2

Entry Pit Container

Exit Pit Container

AECOM

Until Corporation
Rochester MGP Utility Upgrade Project

HDD Drilling Mud Containers

Figure 4-1

Primary Trench Area

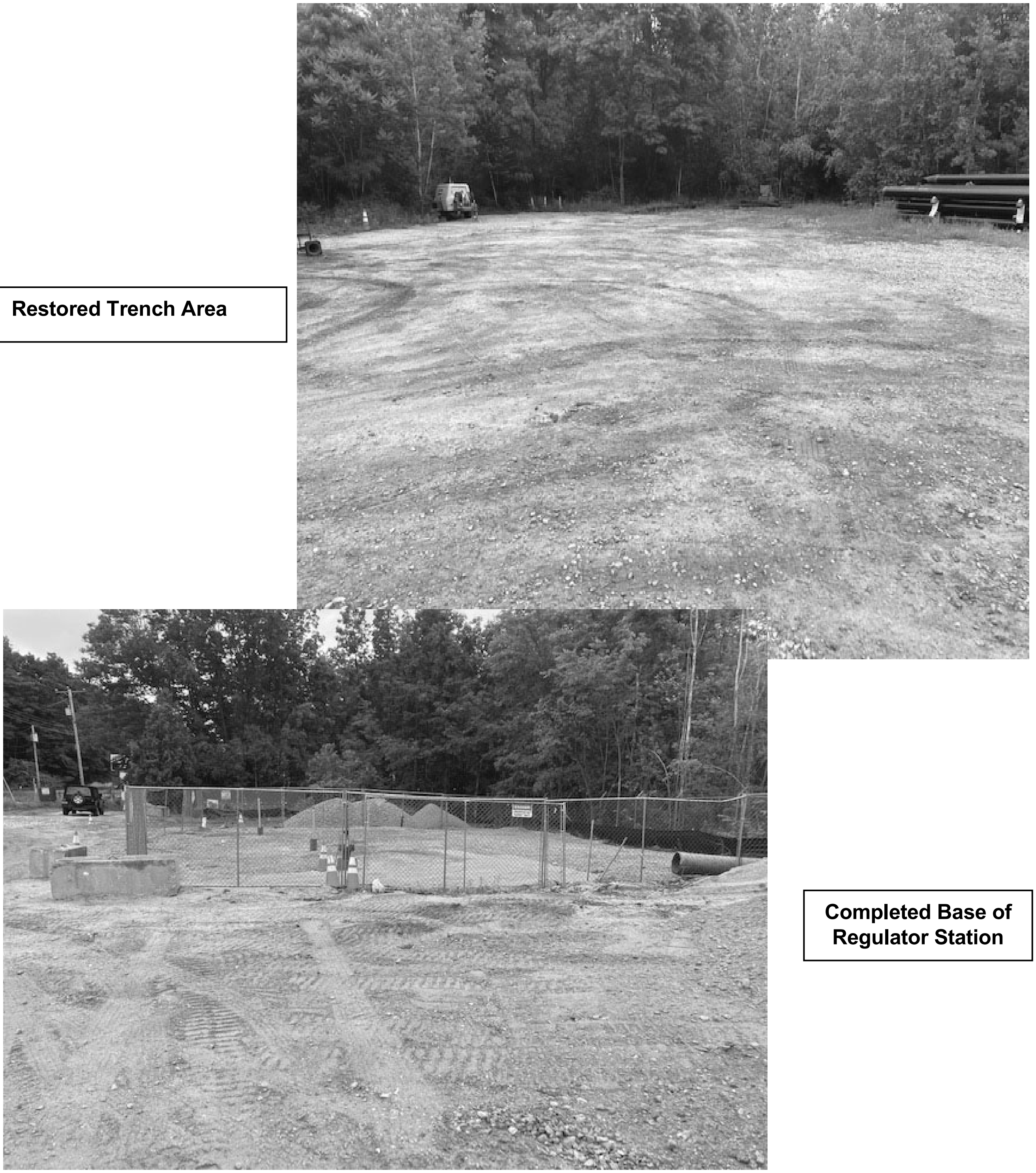
View of Pipe in Trench

AECOM

Until Corporation
Rochester MGP Utility Upgrade Project

Regulator Station Piping

Figure 4-2


Restored Trench Area

Completed Base of Regulator Station

Until Corporation
Rochester MGP Utility Upgrade Project

Restored Site

Figure 4-3

Tables

Table 4-1
Waste Profile Development
Soil - Horizontal Directional Drill Pit
Principal MGP Constituents and Detections
Rochester Former Manufacured Gas Plant Site

Sample Location Depths (below ground surface) Date Collected	NHDES Remediation Standards	HDD A 5-10 ft. 9/18/2020	HDD B 5-10 ft. 9/18/2020	HDD C 5-10 ft. 9/18/2020
Volatile Organic Compounds (ug/Kg)				
Benzene	300	<3.16	<2.97	<3.66
Toluene	100,000	<3.16	<2.97	<3.66
Ethylbenzene	120,000	<3.16	<2.97	<3.66
o-Xylene	500,000	<3.16	<2.97	<3.66
m-Xylene & p-Xylene	500,000	<6.31	<5.95	<7.33
Acetone	75,000	<31.6	<29.7	<36.6
Polycyclic Aromatic Hydrocarbons (ug/Kg)				
2-Methylnaphthalene	96,000	73.6	<74.2	<76.9
Acenaphthene	340,000	NA	NA	NA
Acenaphthylene	490,000	<70.1	114	<76.9
Anthracene	1,000,000	91.8	247	<76.9
Benzo[a]anthracene	1,000	174	178	<76.9
Benzo[a]pyrene	700	192	262	<76.9
Benzo[b]fluoranthene	1,000	311	157	<76.9
Benzo[g,h,i]perylene	---	325	185	<76.9
Benzo[k]fluoranthene	12,000	211	122	<76.9
Chrysene	120,000	218	157	<76.9
Dibenz(a,h)anthracene	700	111	<74.2	<76.9
Fluoranthene	960,000	<70.1	<74.2	<76.9
Fluorene	77,000	NA	NA	NA
Indeno[1,2,3-cd]pyrene	1,000	267	151	<76.9
Naphthalene	5,000	98.5	<74.2	<76.9
Phenanthrene	---	285	<74.2	<76.9
Pyrene	720,000	<70.1	<74.2	<76.9
Total Petroleum Hydrocarbons (mg/Kg)				
TPH 8100	10,000	26.2	39.9	<15.1
Inorganic Compounds (mg/Kg)				
Arsenic	11	9.3	7.62	5.98
Barium	1,000	45.9	25.5	20.4
Chromium	1000	11.7	8.84	7.03
Lead	400	39.2	5.21	3.36
Sulfur	---	158	60.9	83.8
Mercury	7	0.0417	<0.0367	<0.0316
Reactive Cyanide	---	<10	<10	<10
Reactive Sulfde	---	<10	<10	<10

Notes:

ug/Kg - micrograms per kilogram

mg/Kg - milligrams per kilogram

Table 4-2
Waste Profile Development
Drilling Mud - Horizontal Directional Drill
Rochester Former Manufactured Gas Plant Site

Parameters	Entry Pit (Site)	Exit Pit (Ballfield)
TCLP Volatile Organic Compounds (ug/l)		
Benzene	< 10.0	< 10.0
2-Butanone (MEK)	< 20.0	< 20.0
Carbon tetrachloride	< 10.0	< 10.0
Chlorobenzene	< 10.0	< 10.0
Chloroform	< 10.0	< 10.0
1,2-Dichloroethane	< 10.0	< 10.0
1,1-Dichloroethene	< 10.0	< 10.0
Tetrachloroethene	< 10.0	< 10.0
Trichloroethene	< 10.0	< 10.0
Vinyl chloride	< 10.0	< 10.0
TCLP Semi-Volatile Organic Compounds (ug/l)		
1,4-Dichlorobenzene	< 50.0	< 50.0
2,4-Dinitrotoluene	< 50.0	< 50.0
Hexachlorobenzene	< 50.0	< 50.0
Hexachlorobutadiene	< 50.0	< 50.0
Hexachloroethane	< 50.0	< 50.0
2-Methylphenol	< 50.0	< 50.0
3 & 4-Methylphenol	< 100	< 100
Nitrobenzene	< 50.0	< 50.0
Pentachlorophenol	< 200	< 200
Pyridine	< 50.0	< 50.0
2,4,5-Trichlorophenol	< 50.0	< 50.0
2,4,6-Trichlorophenol	< 50.0	< 50.0
Polychlorinated Biphenyls (ug/Kg dry)		
Aroclor-1016	< 82.0	< 26.3
Aroclor-1221	< 82.0	< 26.3
Aroclor-1232	< 82.0	< 26.3
Aroclor-1242	< 82.0	< 26.3
Aroclor-1248	< 82.0	< 26.3
Aroclor-1254	< 82.0	< 26.3
Aroclor-1260	< 82.0	< 26.3
Aroclor-1262	< 82.0	< 26.3
Aroclor-1268	< 82.0	< 26.3
TCLP Metals (mg/l)		
Silver	< 0.0100	< 0.0100
Arsenic	< 0.0800	< 0.0800
Barium	**0.183**	**0.192**
Cadmium	< 0.0050	< 0.0050
Chromium	< 0.0200	**0.0397**
Mercury	< 0.00070	< 0.00070
Lead	**0.0823**	**0.0654**
Selenium	< 0.0300	< 0.0300
General Chemistry Parameters		
Percent Solids (%)	**18.2**	**56.8**
pH	**7.01**	**8.42**
Total Solids @ 104C (%)	**18.0**	**58.0**
Reactivity Cyanide (mg/Kg)	< 27	< 8
Reactivity Sulfide (mg/Kg)	< 20	< 20
Reactivity	**Negative**	**Negative**

Notes:
ug/l - micrograms per liter
ug/Kg - micrograms per kilogram
mg/l - milligrams per liter
mg/Kg - milligrams per kilogram

Table 4-3
Summary of Waste Disposal Quantities
Horizontal Directional Drilling
Rochester Former Manufactured Gas Plant Site

Soil from Excavation Pits Clean Earth, Loudon, NH		Drilling Mud Tradebe, Newington, NH	
Ship Date	Tons	Ship Date	Tons
12/29/2020	12.09	1/2/2021	11.29
1/12/2021	17.3	1/5/2021	4.32
	15.3		
	15.74	1/13/2021	5.49
1/13/2021	15.34	1/15/2021	12.34
	16.64		
	16.83		
1/14/2021	10.86		
	9.03		
	16.32		
1/15/2021	11.23		
	9.84		
Total	166.5	Total	33.4

Table 4-4
Waste Profile Development
Soil - Regulator Station Piping
Principal MGP Constituents and Detections
Rochester Former Manufacured Gas Plant Site

Sample Location	NHDES Remediation Standards	Trench A	Trench B	Trench C	Trench D	Trench E	Trench F	Trench G	Trench H
Depths (below ground surface)		0-6 ft.	0-6 ft.	0-6 ft.	0-6 ft.	0-6 ft.	0-6 ft.	0-6 ft.	0-6 ft.
Date Collected		9/18/2020	9/18/2020	9/18/2020	9/18/2020	5/5/2021	5/5/2021	5/6/2021	5/6/2021
Volatile Organic Compounds (ug/Kg)									
Benzene	300	<4.34	<5.65	<3.36	<3.10	< 4 85	< 5 52	< 6.23	< 4.95
Toluene	100,000	<4.34	<5.65	<3.36	<3.10	< 4 85	< 5 52	< 6.23	< 4.95
Ethylbenzene	120,000	<4.34	<5.65	<3.36	<3.10	< 4 85	< 5 52	< 6.23	< 4.95
o-Xylene	500,000	<4.34	<5.65	<3.36	<3.10	< 4 85	< 5 52	< 6.23	< 4.95
m-Xylene & p-Xylene	500,000	<8.69	<11.37	<7.37	<6.21	< 9 69	< 11 0	< 12.5	<9.90
Acetone	75,000	<4.34	<56.5	<36.9	36.3	< 48 5	< 5 52	< 62.3	< 49.5
Polycyclic Aromatic Hydrocarbons (ug/Kg)									
2-Methylnaphthalene	96,000	<376	<67.9	<355	96.2	< 78 2	< 75 0	< 76.9	< 77.2
Acenaphthene	340,000	NA	NA	NA	NA	< 78 2	NA	NA	NA
Acenaphthylene	490,000	527	<67.9	1420	77.4	< 78 2	< 75 0	< 76.9	< 77.2
Anthracene	1,000,000	<376	<67.9	1100	134	< 78 2	< 75 0	< 76.9	< 77.2
Benzo[a]anthracene	1,000	1050	<67.9	6,460	279	152	131	118	159
Benzo[a]pyrene	700	1290	<67.9	6,640	318	136	115	99.6	141
Benzo[b]fluoranthene	1,000	980	<67.9	8,170	476	160	121	109	173
Benzo[g,h,i]perylene	---	1090	<67.9	9,550	508	122	109	90.0	136
Benzo[k]fluoranthene	12,000	909	<67.9	3,640	188	104	99.8	97.3	122
Chrysene	120,000	1010	<67.9	6,770	310	184	155	142	204
Dibenz(a,h)anthracene	700	<376	<67.9	2450	159	< 78 2	< 75 0	< 76.9	< 77.2
Fluoranthene	960,000	848	<67.9	6,580	107	242	222	226	307
Fluorene	77,000	NA	NA	NA	NA	< 78 2	NA	NA	NA
Indeno[1,2,3-cd]pyrene	1,000	905	<67.9	7,620	395	108	96.8	84.2	124
Naphthalene	5,000	<376	<67.9	<355	120	< 78 2	< 75 0	< 76.9	< 77.2
Phenanthrene	---	455	<67.9	1720	303	82.8	79.1	91.9	118
Pyrene	720,000	835	<67.9	6,930	109	303	288	256	347
Total Petroleum Hydrocarbons (mg/Kg)									
TPH 8100	10,000	231	<13.8	1220	39.4	74.7	68.1	35.1	70.2
Inorganic Compounds (mg/Kg)									
Arsenic	11	23.3	20	11.1	6.56	14.1	19.9	9.75	10.3
Barium	1,000	55.5	24	38.4	57.2	56.8	56.6	33.4	32.2
Chromium	1000	17.7	11.1	10.1	12.3	17.3	18.4	9.9	10.4
Lead	400	20.1	5.13	44.2	43.9	13.0	12.5	13.2	11.2
Sulfur	---	184	107	318	174	163	150	162	197
Mercury	7	0.0527	<0.0312	0.087	0.0974	< 0 0380	< 0 0385	< 0 0388	< 0 0338
Reactive Cyanide	---	<10	<10	<10	<10	<6	<6	< 12	< 11
Reactive Sulfde	---	<10	<10	<10	<10	<20	<20	< 20	< 20

Notes:
ug/Kg - micrograms per kilogram
mg/Kg - milligrams per kilogram

Table 4-5
Summary of Waste Disposal Quantities
Regulator Station Piping
Rochester Former Manufactured Gas Plant Site

Soil from Pipe Trenching - Clean Earth, Loudon. NH							
April		May		June		August	
Ship Date	Tons	Ship Date	Tons	Ship Date	Tons	Ship Date	Tons
4/7/2021	34.7	5/3/2021	52.4	6/1/2021	49.6	8/16/2021	14.6
4/8/2021	61.7	5/4/2021	58.4	6/2/2021	52.0	8/19/2021	10.00
4/9/2021	57.5	5/5/2021	58.3	6/3/2021	4.0		
4/12/2021	60.9	5/6/2021	52.1	6/9/2021	20.5		
4/13/2021	54.5	5/13/2021	30.1	6/10/2021	18.8		
4/14/2021	63.2			6/11/2021	22.7		
4/15/2021	60.9			6/14/2021	50.1		
4/16/2021	41.6			6/16/2021	36.1		
4/19/2021	66.9			6/17/2021	19.7		
4/20/2021	61.3			6/30/2021	24.1		
4/21/2021	60.5						
4/22/2021	85.1						
4/26/2021	59.3						
4/27/2021	53.0						
4/28/2021	55.9						
4/29/2021	56.8						
4/40/2021	54.0						
Total	**987.8**	**Total**	**251.3**	**Total**	**297.6**	**Total**	**24.6**

Appendix A Laboratory Report - Soil Characterization HDD Entry/Exit Pits

ENVIRONMENTAL SOIL MANAGEMENT COMPANIES
Generator Waste Profile

ESMI Customer: NRC East Environmental Services, Inc.

Purchase Order # 160370

Customer Address: 114 Bridge Rd

City: Salisbury

State: MA

Zip: 01952

Contact: Tim Warr

Tel: 603-770-2988

Fax:

Site Contact: Mark McCabe, AECOM

Tel: 978-905-2311

Cell: 508-423-9018

Site Name: Unitil Former MGP Site

Site Tel: N/A

Site Address: Route 125

City: Rochester

State: NH

Zip: 03839

History of Site Use: ☐**Residential** ☐**Commercial** ☒**Industrial** ☐**Other:**

If commercial, industrial or other, please describe history of site:

Former MGP site.

Event/process generating waste: ☐Leaking UST ☐Leaking AST ☐Surface Spill ☒other(*describe*):

Former MPG site.

Waste Material Description: ***Soil/media is contaminated with:*** (Check All That Apply)

☐ NON-HAZARDOUS ***VIRGIN PETROLEUM*** CONTAMINATED SOIL
- ☐#2, ☐ #4, ☐#6 Fuel Oil ☐Diesel Fuel ☐Gasoline ☐ Jet Fuel ☐Animal/Vegetable/Tall oils ☐White Oil
- ☐Kerosene ☐Mixed Fuels (gas/fuel oil) ☐Petroleum Solvent ☐Hydraulic Oil ☐ Motor Oil

☐ NON-HAZARDOUS ***NON-VIRGIN PETROLEUM*** CONTAMINATED SOIL
- ☐Used Oils ☐Grease/Lubes ☐Used Animal/Vegetable/Tall Oils ☐Waxes ☐Petrolatum ☐Hydraulic Oil
- ☐Lubricating Oils ☐Metal Working Oils ☐Industrial Oils ☐Used Petroleum Solvent☐ Electrical Oil
- ☐Transformer Oil (non-PCB) ☐Urban Fill

☑ NON-HAZARDOUS ***COAL TAR or PCB*** CONTAMINATED SOIL
- ☒ Coal Tar ☐PCB's (<50ppm; Not PCB Remediation Waste)

☐ NON-HAZARDOUS ***DREDGE*** CONTAMINATED SOIL (Also Identify Contaminant)
- ☐Dredge Soil associated with Upland Remediation

Are there any known or suspected past releases of contaminants other than the above listed? NO ☒ **YES** ☐

If **YES**, Specify:

Approximate Tonnage: 300

Physical Characteristics: %Gravel 40 %Sand 40 %Clay/Silt 20 % H20_____ %Debris 0 ∑ =100%

Describe Debris:

I hereby certify, to the best of my knowledge, (a) I am a responsible official of the generator, (b) that the sampling requirements, pursuant to Env-Or 611.04(NH only), and any additional sampling required by the state of origin, has been adhered to, (c) that the information provided in the profile is correct and complete, (d) that the transport, treatment and recycling of the contaminated materials do not violate any laws or regulations of the state of origin.

Signature:

Date: 12/23/2020

Typed/Printed Name: Mark McCabe

Company: AECOM

Check One: Owner: ☐ **Generator:** ☐ **Contractor:** ☒ **Consultant:** ☐ **Other (explain):**

Acceptance of all projects is predicated on the review of this form and the analytical results of the material to be received.

ESMI of New Hampshire
67 International Drive
Loudon, New Hampshire 03307
Phone: 603.783.0228
Fax: 603.783.0104

ESMI of New York
304 Towpath Road
Fort Edward, New York 12828
Phone: 518.747.5500
Fax: 518.747.1181

Table 1
Summary of Results
Former MGP Site Rochester, NH
Principal MGP Constituents and Detections
Waste Profile Development

	Regulator Station Piping				HDD Area		
Sample Location	**Trench A**	**Trench B**	**Trench C**	**Trench D**	**HDD A**	**HDD B**	**HDD C**
Depths (below ground surface)	**0-6 ft.**	**0-6 ft.**	**0-6 ft.**	**0-6 ft.**	**5-10 ft.**	**5-10 ft.**	**5-10 ft.**
Date Collected	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**
Volatile Organic Compounds (ug/Kg)							
Benzene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
Toluene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
Ethylbenzene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
o-Xylene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
m-Xylene & p-Xylene	<8.69	<11.37	<7.37	<6.21	<6.31	<5.95	<7.33
Acetone	<4.34	<56.5	<36.9	36.3	<31.6	<29.7	<36.6
Polycyclic Aromatic Hydrocarbons (ug/Kg)							
2-Methylnaphthalene	<376	<67.9	<355	96.2	73.6	<74.2	<76.9
Acenaphthylene	527	<67.9	1420	77.4	<70.1	114	<76.9
Anthracene	<376	<67.9	1100	134	91.8	247	<76.9
Benzo[a]anthracene	1050	<67.9	6,460	279	174	178	<76.9
Benzo[a]pyrene	1290	<67.9	6,640	318	192	262	<76.9
Benzo[b]fluoranthene	980	<67.9	8,170	476	311	157	<76.9
Benzo[g,h,i]perylene	1090	<67.9	9,550	508	325	185	<76.9
Benzo[k]fluoranthene	909	<67.9	3,640	188	211	122	<76.9
Chrysene	1010	<67.9	6,770	310	218	157	<76.9
Dibenz(a,h)anthracene	<376	<67.9	2450	159	111	<74.2	<76.9
Fluoranthene	848	<67.9	6,580	107	<70.1	<74.2	<76.9
Indeno[1,2,3-cd]pyrene	905	<67.9	7,620	395	267	151	<76.9
Naphthalene	<376	<67.9	<355	120	98.5	<74.2	<76.9
Phenanthrene	455	<67.9	1720	303	285	<74.2	<76.9
Pyrene	835	<67.9	6,930	109	<70.1	<74.2	<76.9
Total Petroleum Hydrocarbons (mg/Kg)							
TPH 8100	231	<13.8	1220	39.4	26.2	39.9	<15.1
Inorganic Compounds (mg/Kg)							
Arsenic	23.3	20	11.1	6.56	9.3	7.62	5.98
Barium	55.5	24	38.4	57.2	45.9	25.5	20.4
Chromium	17.7	11.1	10.1	12.3	11.7	8.84	7.03
Lead	20.1	5.13	44.2	43.9	39.2	5.21	3.36
Sulfur	184	107	318	174	158	60.9	83.8
Mercury	0.0527	<0.0312	0.087	0.0974	0.0417	<0.0367	<0.0316
Reactive Cyanide	<10	<10	<10	<10	<10	<10	<10
Reactive Sulfde	<10	<10	<10	<10	<10	<10	<10

eurofins | Environment Testing
New England

☑ Final Report
☐ Revised Report

Report Date:
29-Sep-20 15:34

Laboratory Report
SC59391

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Colin Callahan

Project: Rochester NH MGP
Project #: 60139732*2900

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Connecticut # PH-0722
Massachusetts # RI907
New Hampshire # 2240
New York # 11393
Rhode Island # LAI00368
USDA # P330-20-00109

Authorized by:

Agnes Huntley
Project Manager

Agnes R Huntley

Eurofins Environment Testing New England holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 78 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Environment Testing New England.

Eurofins Environment Testing New England is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Environment Testing New England is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.eurofinsus.com/Spectrum for a full listing of our current certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 413-789-9018 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC59391

Project: Rochester NH MGP

Project Number: 60139732*2900

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC59391-01	TrenchA_0-6	Soil	18-Sep-20 08:50	21-Sep-20 16:40
SC59391-02	TrenchB_0-6	Soil	18-Sep-20 09:10	21-Sep-20 16:40
SC59391-03	TrenchD_0-6	Soil	18-Sep-20 10:09	21-Sep-20 16:40
SC59391-04	TrenchC_0-6	Soil	18-Sep-20 09:42	21-Sep-20 16:40
SC59391-05	HDDB_5-10	Soil	18-Sep-20 11:10	21-Sep-20 16:40
SC59391-06	HDDA_5-10	Soil	18-Sep-20 10:40	21-Sep-20 16:40
SC59391-07	HDDC_5-10	Soil	18-Sep-20 11:38	21-Sep-20 16:40
SC59391-08	Trip Blank	Trip Blank	18-Sep-20 00:00	21-Sep-20 16:40

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as “<” (less than) the reporting limit in this report.

The samples were received 2.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

VOA vials preserved with deionized water were received frozen upon custody transfer to laboratory representative.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

Reactivity (40 CFR 261.23) Case Narrative:

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2) and (4); however, Eurofins Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Reactive sulfide and cyanide are tested at a pH of 2 and not tested at all conditions between pH 2 and12.5 as stated in 40 CFR 261.23, section (5); thus reactive cyanide and sulfide results as reported in this document can not be used to support the nonreactive properties of these samples.

The responsibility falls on the generator to use knowledge of the waste to determine if the waste meets or does not meet the descriptive, prose definition of reactivity.

8260 Low Level Soil:

The original analysis of sample SC59391-02(B) yeilded invalid results due to a poor purge of the sample vial. The second vial (C) was cracked upon thawing from the freezer and could not be used. A fresh sample was made (F) for the bulk soil container (D) and analyzed.

The analyte 2-Butanone (MEK) is identified as a problematic compound when purging a low level soil and failed in the initial calibration. As a result, the samples were analyzed and reported for MEK for a high level soil analysis.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010C

Spikes:

2001784-MS1 *Source: SC59391-01*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Silver

2001784-MSD1 *Source: SC59391-01*

SW846 6010C

Spikes:

2001784-MSD1 *Source: SC59391-01*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Silver

SW846 8100Mod.

Samples:

SC59391-01 *TrenchA_0-6*

The Reporting Limit has been raised to account for matrix interference.

SC59391-04 *TrenchC_0-6*

The Reporting Limit has been raised to account for matrix interference.

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

1-Chlorooctadecane

SW846 8260C LLS

Laboratory Control Samples:

2001826 BS/BSD

Acetone percent recoveries (52/52) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchC_0-6
TrenchD_0-6
Trip Blank

Chloroethane percent recoveries (513/515) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchC_0-6
TrenchD_0-6
Trip Blank

Ethanol percent recoveries (52/73) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchC_0-6
TrenchD_0-6
Trip Blank

2001826 BSD

SW846 8260C LLS

Laboratory Control Samples:

2001826 BSD

Ethanol RPD 34% (30%) is outside individual acceptance criteria.

2001826-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane
Ethanol

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

2001826-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane
Ethanol

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

2001880 BS/BSD

Acetone percent recoveries (39/50) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

TrenchB_0-6

Chloroethane percent recoveries (525/541) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

TrenchB_0-6

2001880-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

2001880-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

Samples:

SC59391-01 *TrenchA_0-6*

Internal standard out due to matrix interference

SW846 8260C LLS

Samples:

SC59391-03	*TrenchD_0-6*

Internal standard out due to matrix interference

Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogates with three required by program methods.

4-Bromofluorobenzene

SC59391-04	*TrenchC_0-6*

Internal standard out due to matrix interference

SC59391-05	*HDDB_5-10*

Internal standard out due to matrix interference

SC59391-06	*HDDA_5-10*

Internal standard out due to matrix interference

SC59391-07	*HDDC_5-10*

Internal standard out due to matrix interference

SW846 8270D

Laboratory Control Samples:

2001800 BS/BSD

4-Bromophenyl phenyl ether percent recoveries (20/21) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

Aniline percent recoveries (39/41) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

SW846 8270D

Laboratory Control Samples:

2001800 BS/BSD

Benzidine percent recoveries (13/13) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

Benzoic acid percent recoveries (16/19) are outside individual acceptance criteria (30-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

Pyridine percent recoveries (33/43) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

2001800-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

4-Bromophenyl phenyl ether
Aniline
Benzidine
Benzoic acid
Pyridine

2001800-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

4-Bromophenyl phenyl ether
Benzidine
Benzoic acid

Duplicates:

2001800-DUP1 *Source: SC59391-01*

Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results

Phenanthrene

RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.

Benzo (k) fluoranthene

SW846 8270D

Duplicates:

2001800-DUP1	*Source: SC59391-01*

The Reporting Limit has been raised to account for matrix interference.

Samples:

SC59391-01	*TrenchA_0-6*

The Reporting Limit has been raised to account for matrix interference.

SC59391-04	*TrenchC_0-6*

The Reporting Limit has been raised to account for matrix interference.

Sample Acceptance Check Form

Client:	AECOM Environment - Chelmsford, MA
Project:	Rochester NH MGP / 60139732*2900
Work Order:	SC59391
Sample(s) received on:	9/21/2020

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	**No**	**N/A**
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC59391-01 **Client ID:** TrenchA_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	23.3		1.84	mg/kg	SW846 6010C
Barium	55.5		1.22	mg/kg	SW846 6010C
Chromium	17.7		1.22	mg/kg	SW846 6010C
Lead	20.1		1.84	mg/kg	SW846 6010C
Sulfur	184		30.6	mg/kg	SW846 6010C
Mercury	0.0527		0.0375	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	231		30.7	mg/kg	SW846 8100Mod.
Acenaphthylene	527		376	µg/kg	SW846 8270D
Benzo (a) anthracene	1050		376	µg/kg	SW846 8270D
Benzo (a) pyrene	1290		376	µg/kg	SW846 8270D
Benzo (b) fluoranthene	980		376	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	1090		376	µg/kg	SW846 8270D
Benzo (k) fluoranthene	909		376	µg/kg	SW846 8270D
Chrysene	1010		376	µg/kg	SW846 8270D
Fluoranthene	848		376	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	905		376	µg/kg	SW846 8270D
Phenanthrene	455		376	µg/kg	SW846 8270D
Pyrene	835		376	µg/kg	SW846 8270D

Lab ID: SC59391-02 **Client ID:** TrenchB_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	20.0		1.65	mg/kg	SW846 6010C
Barium	24.0		1.10	mg/kg	SW846 6010C
Chromium	11.1		1.10	mg/kg	SW846 6010C
Lead	5.13		1.65	mg/kg	SW846 6010C
Sulfur	107		27.5	mg/kg	SW846 6010C

Lab ID: SC59391-03 **Client ID:** TrenchD_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	6.56		1.54	mg/kg	SW846 6010C
Barium	57.2		1.03	mg/kg	SW846 6010C
Chromium	12.3		1.03	mg/kg	SW846 6010C
Lead	43.9		1.54	mg/kg	SW846 6010C
Sulfur	174		25.7	mg/kg	SW846 6010C
Mercury	0.0974		0.0296	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	39.4		13.4	mg/kg	SW846 8100Mod.
Acetone	36.3		31.0	µg/kg	SW846 8260C LLS
2-Methylnaphthalene	96.2		71.0	µg/kg	SW846 8270D
Acenaphthylene	77.4		71.0	µg/kg	SW846 8270D
Anthracene	134		71.0	µg/kg	SW846 8270D
Benzo (a) anthracene	279		71.0	µg/kg	SW846 8270D
Benzo (a) pyrene	318		71.0	µg/kg	SW846 8270D
Benzo (b) fluoranthene	476		71.0	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	508		71.0	µg/kg	SW846 8270D
Benzo (k) fluoranthene	188		71.0	µg/kg	SW846 8270D
Chrysene	310		71.0	µg/kg	SW846 8270D
Dibenzo (a,h) anthracene	159		71.0	µg/kg	SW846 8270D
Fluoranthene	107		71.0	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	395		71.0	µg/kg	SW846 8270D
Naphthalene	120		71.0	µg/kg	SW846 8270D
Phenanthrene	303		71.0	µg/kg	SW846 8270D
Pyrene	109		71.0	µg/kg	SW846 8270D

Lab ID: SC59391-04 **Client ID:** TrenchC_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	11.1		1.72	mg/kg	SW846 6010C
Barium	38.4		1.15	mg/kg	SW846 6010C
Chromium	10.1		1.15	mg/kg	SW846 6010C
Lead	44.2		1.72	mg/kg	SW846 6010C
Sulfur	318		28.7	mg/kg	SW846 6010C
Mercury	0.0870		0.0306	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	1220		27.3	mg/kg	SW846 8100Mod.
Acenaphthylene	1420		355	µg/kg	SW846 8270D
Anthracene	1100		355	µg/kg	SW846 8270D
Benzo (a) anthracene	6460		355	µg/kg	SW846 8270D
Benzo (a) pyrene	6640		355	µg/kg	SW846 8270D
Benzo (b) fluoranthene	8170		355	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	9550		355	µg/kg	SW846 8270D
Benzo (k) fluoranthene	3640		355	µg/kg	SW846 8270D
Chrysene	6770		355	µg/kg	SW846 8270D
Dibenzo (a,h) anthracene	2450		355	µg/kg	SW846 8270D
Fluoranthene	6580		355	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	7620		355	µg/kg	SW846 8270D
Phenanthrene	1720		355	µg/kg	SW846 8270D
Pyrene	6930		355	µg/kg	SW846 8270D

Lab ID: SC59391-05 **Client ID:** HDDB_5-10

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	7.62		1.79	mg/kg	SW846 6010C
Barium	25.5		1.19	mg/kg	SW846 6010C
Chromium	8.84		1.19	mg/kg	SW846 6010C
Lead	5.21		1.79	mg/kg	SW846 6010C
Sulfur	60.9		29.8	mg/kg	SW846 6010C
Total Petroleum Hydrocarbons	39.9		14.7	mg/kg	SW846 8100Mod.
Acenaphthylene	114		74.2	µg/kg	SW846 8270D
Anthracene	247		74.2	µg/kg	SW846 8270D
Benzo (a) anthracene	178		74.2	µg/kg	SW846 8270D
Benzo (a) pyrene	262		74.2	µg/kg	SW846 8270D
Benzo (b) fluoranthene	157		74.2	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	185		74.2	µg/kg	SW846 8270D
Benzo (k) fluoranthene	122		74.2	µg/kg	SW846 8270D
Chrysene	157		74.2	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	151		74.2	µg/kg	SW846 8270D

Lab ID: SC59391-06 **Client ID:** HDDA_5-10

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	9.30		1.66	mg/kg	SW846 6010C
Barium	45.9		1.11	mg/kg	SW846 6010C
Chromium	11.7		1.11	mg/kg	SW846 6010C
Lead	39.2		1.66	mg/kg	SW846 6010C
Sulfur	158		27.7	mg/kg	SW846 6010C
Mercury	0.0417		0.0310	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	26.2		13.7	mg/kg	SW846 8100Mod.
2-Methylnaphthalene	73.6		70.1	µg/kg	SW846 8270D
Anthracene	91.8		70.1	µg/kg	SW846 8270D
Benzo (a) anthracene	174		70.1	µg/kg	SW846 8270D
Benzo (a) pyrene	192		70.1	µg/kg	SW846 8270D
Benzo (b) fluoranthene	311		70.1	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	325		70.1	µg/kg	SW846 8270D
Benzo (k) fluoranthene	211		70.1	µg/kg	SW846 8270D
Chrysene	218		70.1	µg/kg	SW846 8270D
Dibenzo (a,h) anthracene	111		70.1	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	267		70.1	µg/kg	SW846 8270D
Naphthalene	98.5		70.1	µg/kg	SW846 8270D
Phenanthrene	285		70.1	µg/kg	SW846 8270D

Lab ID: SC59391-07 **Client ID:** HDDC_5-10

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	5.98		1.95	mg/kg	SW846 6010C
Barium	20.4		1.30	mg/kg	SW846 6010C
Chromium	7.03		1.30	mg/kg	SW846 6010C
Lead	3.36		1.95	mg/kg	SW846 6010C
Sulfur	83.8		32.4	mg/kg	SW846 6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)						Initial weight: 22.23 g							
78-93-3	2-Butanone (MEK)	< 93.9	D	µg/kg dry	93.9	21.4	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*111*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*110*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260			IS1										
Prepared by method SW846 5035A Soil (low level)						Initial weight: 6.66 g							
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 4.34		µg/kg dry	4.34	2.83	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 43.4		µg/kg dry	43.4	9.73	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 4.34		µg/kg dry	4.34	2.61	1	"	"	"	"	"	X
71-43-2	Benzene	< 4.34		µg/kg dry	4.34	2.90	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 4.34		µg/kg dry	4.34	2.89	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 4.34		µg/kg dry	4.34	2.47	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 4.34		µg/kg dry	4.34	3.19	1	"	"	"	"	"	X
75-25-2	Bromoform	< 4.34		µg/kg dry	4.34	3.32	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 8.69		µg/kg dry	8.69	1.42	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 8.69		µg/kg dry	8.69	4.66	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 4.34		µg/kg dry	4.34	3.50	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 4.34		µg/kg dry	4.34	3.42	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 8.69		µg/kg dry	8.69	3.05	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 4.34		µg/kg dry	4.34	2.74	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 4.34		µg/kg dry	4.34	3.18	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 8.69		µg/kg dry	8.69	3.19	1	"	"	"	"	"	X
67-66-3	Chloroform	< 4.34		µg/kg dry	4.34	2.92	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 8.69		µg/kg dry	8.69	3.34	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 4.34		µg/kg dry	4.34	3.46	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 4.34		µg/kg dry	4.34	3.77	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 8.69		µg/kg dry	8.69	3.68	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 4.34		µg/kg dry	4.34	2.88	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 4.34		µg/kg dry	4.34	3.12	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 4.34		µg/kg dry	4.34	2.55	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 4.34		µg/kg dry	4.34	4.03	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 4.34		µg/kg dry	4.34	3.48	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 4.34		µg/kg dry	4.34	4.12	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 8.69		µg/kg dry	8.69	2.33	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 4.34		µg/kg dry	4.34	2.95	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 4.34		µg/kg dry	4.34	2.93	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 4.34		µg/kg dry	4.34	2.66	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 4.34		µg/kg dry	4.34	2.51	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 4.34		µg/kg dry	4.34	2.70	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 4.34		µg/kg dry	4.34	2.88	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 4.34		µg/kg dry	4.34	3.32	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 6.66 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 4.34		µg/kg dry	4.34	3.00	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 4.34		µg/kg dry	4.34	2.95	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 4.34		µg/kg dry	4.34	2.83	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 4.34		µg/kg dry	4.34	3.30	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 4.34		µg/kg dry	4.34	3.10	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 8.69		µg/kg dry	8.69	4.37	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 8.69		µg/kg dry	8.69	2.55	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 4.34		µg/kg dry	4.34	3.28	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 4.34		µg/kg dry	4.34	4.27	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 4.34		µg/kg dry	4.34	2.41	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 8.69		µg/kg dry	8.69	2.81	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 8.69		µg/kg dry	8.69	2.33	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 4.34		µg/kg dry	4.34	3.93	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 4.34		µg/kg dry	4.34	3.68	1	"	"	"	"	"	X
100-42-5	Styrene	< 4.34		µg/kg dry	4.34	3.36	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 4.34		µg/kg dry	4.34	3.26	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 4.34		µg/kg dry	4.34	3.98	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 4.34		µg/kg dry	4.34	2.42	1	"	"	"	"	"	X
108-88-3	Toluene	< 4.34		µg/kg dry	4.34	2.75	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 4.34		µg/kg dry	4.34	3.67	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 4.34		µg/kg dry	4.34	4.01	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 4.34		µg/kg dry	4.34	4.13	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 4.34		µg/kg dry	4.34	2.96	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 4.34		µg/kg dry	4.34	3.28	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 4.34		µg/kg dry	4.34	2.92	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 4.34		µg/kg dry	4.34	3.32	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 4.34		µg/kg dry	4.34	3.82	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 4.34		µg/kg dry	4.34	3.68	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 4.34		µg/kg dry	4.34	3.69	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 4.34		µg/kg dry	4.34	2.65	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 8.69		µg/kg dry	8.69	5.94	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 4.34		µg/kg dry	4.34	3.17	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 8.69		µg/kg dry	8.69	2.20	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 4.34		µg/kg dry	4.34	2.29	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 4.34		µg/kg dry	4.34	3.43	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 4.34		µg/kg dry	4.34	2.86	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 4.34		µg/kg dry	4.34	3.10	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 86.9		µg/kg dry	86.9	23.3	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 86.9		µg/kg dry	86.9	27.0	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 21.7		µg/kg dry	21.7	3.21	1	"	"	"	"	"	X
64-17-5	Ethanol	< 869		µg/kg dry	869	53.9	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
						Initial weight: 6.66 g							
460-00-4	*4-Bromofluorobenzene*	*89*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*109*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546			R01										
83-32-9	Acenaphthene	< 376		µg/kg dry	376	200	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**527**		µg/kg dry	376	196	1	"	"	"	"	"	X
62-53-3	Aniline	< 1860		µg/kg dry	1860	119	1	"	"	"	"	"	X
120-12-7	Anthracene	< 376		µg/kg dry	376	217	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 1860		µg/kg dry	1860	202	1	"	"	"	"	"	
92-87-5	Benzidine	< 3720		µg/kg dry	3720	119	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**1,050**		µg/kg dry	376	212	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**1,290**		µg/kg dry	376	257	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**980**		µg/kg dry	376	283	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**1,090**		µg/kg dry	376	266	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**909**		µg/kg dry	376	322	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 1860		µg/kg dry	1860	112	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 1860		µg/kg dry	1860	431	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 1860		µg/kg dry	1860	188	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 943		µg/kg dry	943	174	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 943		µg/kg dry	943	151	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 943		µg/kg dry	943	240	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 1860		µg/kg dry	1860	211	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 1860		µg/kg dry	1860	187	1	"	"	"	"	"	X
86-74-8	Carbazole	< 943		µg/kg dry	943	217	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 1860		µg/kg dry	1860	219	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 943		µg/kg dry	943	116	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 1860		µg/kg dry	1860	255	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 943		µg/kg dry	943	181	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 1860		µg/kg dry	1860	182	1	"	"	"	"	"	X
218-01-9	Chrysene	**1,010**		µg/kg dry	376	213	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 376		µg/kg dry	376	278	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 943		µg/kg dry	943	253	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1860		µg/kg dry	1860	222	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1860		µg/kg dry	1860	201	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1860		µg/kg dry	1860	212	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 1860		µg/kg dry	1860	206	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 943		µg/kg dry	943	229	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 1860		µg/kg dry	1860	195	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
	Semivolatile Organic Compounds by GCMS												
	Semivolatile Organic Compounds		R01										
131-11-3	Dimethyl phthalate	< 1860		µg/kg dry	1860	209	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 1860		µg/kg dry	1860	147	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 1860		µg/kg dry	1860	199	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 1860		µg/kg dry	1860	267	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 1860		µg/kg dry	1860	193	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 943		µg/kg dry	943	226	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 943		µg/kg dry	943	192	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 1860		µg/kg dry	1860	277	1	"	"	"	"	"	X
206-44-0	Fluoranthene	**848**		µg/kg dry	376	221	1	"	"	"	"	"	X
86-73-7	Fluorene	< 376		µg/kg dry	376	243	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 943		µg/kg dry	943	237	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 943		µg/kg dry	943	237	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 943		µg/kg dry	943	238	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 943		µg/kg dry	943	213	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**905**		µg/kg dry	376	257	1	"	"	"	"	"	X
78-59-1	Isophorone	< 943		µg/kg dry	943	145	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 376		µg/kg dry	376	264	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 1860		µg/kg dry	1860	150	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 1860		µg/kg dry	1860	146	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 376		µg/kg dry	376	217	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 1860		µg/kg dry	1860	169	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 1860		µg/kg dry	1860	172	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 943		µg/kg dry	943	248	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 943		µg/kg dry	943	218	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 943		µg/kg dry	943	165	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 7450		µg/kg dry	7450	248	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 943		µg/kg dry	943	123	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 943		µg/kg dry	943	165	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 1860		µg/kg dry	1860	190	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 1860		µg/kg dry	1860	222	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**455**		µg/kg dry	376	213	1	"	"	"	"	"	X
108-95-2	Phenol	< 1860		µg/kg dry	1860	189	1	"	"	"	"	"	X
129-00-0	Pyrene	**835**		µg/kg dry	376	208	1	"	"	"	"	"	X
110-86-1	Pyridine	< 1860		µg/kg dry	1860	441	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1860		µg/kg dry	1860	229	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 376		µg/kg dry	376	208	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 1860		µg/kg dry	1860	192	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 943		µg/kg dry	943	230	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 1860		µg/kg dry	1860	198	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 1860		µg/kg dry	1860	222	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*64*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*93*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
4165-60-0	*Nitrobenzene-d5*	*88*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*86*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*72*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*72*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC			R01										
Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	**231**		mg/kg dry	30.7	25.6	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*77*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*101*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.67		mg/kg dry	3.67	0.198	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**23.3**		mg/kg dry	1.84	0.233	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**55.5**		mg/kg dry	1.22	0.144	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.612		mg/kg dry	0.612	0.0317	1	"	"	"	"	"	X
7440-47-3	Chromium	**17.7**		mg/kg dry	1.22	0.163	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0527**		mg/kg dry	0.0375	0.0104	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**20.1**		mg/kg dry	1.84	0.259	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.84		mg/kg dry	1.84	0.350	1	"	"	"	"	"	X
7704-34-9	Sulfur	**184**		mg/kg dry	30.6	2.10	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**86.4**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:36	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)						Initial weight: 27.33 g							
78-93-3	2-Butanone (MEK)	< 60.3	D	µg/kg dry	60.3	13.8	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*94*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*115*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (low level)						Initial weight: 4.58 g							
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.65		µg/kg dry	5.65	3.68	1	SW846 8260C LLS	28-Sep-20	29-Sep-20	MED	2001880	X
67-64-1	Acetone	< 56.5		µg/kg dry	56.5	12.7	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 5.65		µg/kg dry	5.65	3.39	1	"	"	"	"	"	X
71-43-2	Benzene	< 5.65		µg/kg dry	5.65	3.77	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 5.65		µg/kg dry	5.65	3.76	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 5.65		µg/kg dry	5.65	3.21	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 5.65		µg/kg dry	5.65	4.15	1	"	"	"	"	"	X
75-25-2	Bromoform	< 5.65		µg/kg dry	5.65	4.32	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 11.3		µg/kg dry	11.3	1.84	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 11.3		µg/kg dry	11.3	6.06	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 5.65		µg/kg dry	5.65	4.55	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 5.65		µg/kg dry	5.65	4.45	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 11.3		µg/kg dry	11.3	3.97	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.65		µg/kg dry	5.65	3.56	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.65		µg/kg dry	5.65	4.14	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 11.3		µg/kg dry	11.3	4.15	1	"	"	"	"	"	X
67-66-3	Chloroform	< 5.65		µg/kg dry	5.65	3.80	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 11.3		µg/kg dry	11.3	4.34	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 5.65		µg/kg dry	5.65	4.50	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 5.65		µg/kg dry	5.65	4.90	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 11.3		µg/kg dry	11.3	4.79	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 5.65		µg/kg dry	5.65	3.74	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 5.65		µg/kg dry	5.65	4.06	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 5.65		µg/kg dry	5.65	3.32	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.65		µg/kg dry	5.65	5.24	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.65		µg/kg dry	5.65	4.53	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.65		µg/kg dry	5.65	5.36	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 11.3		µg/kg dry	11.3	3.03	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.65		µg/kg dry	5.65	3.83	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.65		µg/kg dry	5.65	3.81	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.65		µg/kg dry	5.65	3.46	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 5.65		µg/kg dry	5.65	3.27	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 5.65		µg/kg dry	5.65	3.51	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.65		µg/kg dry	5.65	3.74	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 5.65		µg/kg dry	5.65	4.32	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Initial weight: 4.58 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
594-20-7	2,2-Dichloropropane	< 5.65		µg/kg dry	5.65	3.90	1	SW846 8260C LLS	28-Sep-20	29-Sep-20	MED	2001880	X
563-58-6	1,1-Dichloropropene	< 5.65		µg/kg dry	5.65	3.84	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 5.65		µg/kg dry	5.65	3.68	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 5.65		µg/kg dry	5.65	4.29	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.65		µg/kg dry	5.65	4.03	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 11.3		µg/kg dry	11.3	5.68	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 11.3		µg/kg dry	11.3	3.32	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.65		µg/kg dry	5.65	4.27	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 5.65		µg/kg dry	5.65	5.55	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 5.65		µg/kg dry	5.65	3.13	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 11.3		µg/kg dry	11.3	3.65	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 11.3		µg/kg dry	11.3	3.03	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.65		µg/kg dry	5.65	5.11	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 5.65		µg/kg dry	5.65	4.78	1	"	"	"	"	"	X
100-42-5	Styrene	< 5.65		µg/kg dry	5.65	4.37	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 5.65		µg/kg dry	5.65	4.24	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.65		µg/kg dry	5.65	5.18	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 5.65		µg/kg dry	5.65	3.14	1	"	"	"	"	"	X
108-88-3	Toluene	< 5.65		µg/kg dry	5.65	3.58	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 5.65		µg/kg dry	5.65	4.77	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.65		µg/kg dry	5.65	5.21	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 5.65		µg/kg dry	5.65	5.37	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 5.65		µg/kg dry	5.65	3.85	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.65		µg/kg dry	5.65	4.26	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 5.65		µg/kg dry	5.65	3.80	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 5.65		µg/kg dry	5.65	4.32	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 5.65		µg/kg dry	5.65	4.97	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 5.65		µg/kg dry	5.65	4.78	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 5.65		µg/kg dry	5.65	4.80	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 5.65		µg/kg dry	5.65	3.45	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 11.3		µg/kg dry	11.3	7.72	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 5.65		µg/kg dry	5.65	4.12	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 11.3		µg/kg dry	11.3	2.86	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5.65		µg/kg dry	5.65	2.97	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 5.65		µg/kg dry	5.65	4.46	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 5.65		µg/kg dry	5.65	3.72	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 5.65		µg/kg dry	5.65	4.03	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 113		µg/kg dry	113	30.3	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 113		µg/kg dry	113	35.1	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 28.3		µg/kg dry	28.3	4.17	1	"	"	"	"	"	X
64-17-5	Ethanol	< 1130		µg/kg dry	1130	70.1	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
							Initial weight: 4.58 g						
460-00-4	*4-Bromofluorobenzene*	*93*			*70-130 %*			SW846 8260C LLS	28-Sep-20	29-Sep-20	MED	2001880	
2037-26-5	*Toluene-d8*	*103*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546													
83-32-9	Acenaphthene	< 67.9		µg/kg dry	67.9	36.0	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	< 67.9		µg/kg dry	67.9	35.4	1	"	"	"	"	"	X
62-53-3	Aniline	< 336		µg/kg dry	336	21.4	1	"	"	"	"	"	X
120-12-7	Anthracene	< 67.9		µg/kg dry	67.9	39.1	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 336		µg/kg dry	336	36.4	1	"	"	"	"	"	
92-87-5	Benzidine	< 672		µg/kg dry	672	21.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 67.9		µg/kg dry	67.9	38.2	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 67.9		µg/kg dry	67.9	46.4	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 67.9		µg/kg dry	67.9	51.1	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 67.9		µg/kg dry	67.9	47.9	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 67.9		µg/kg dry	67.9	58.0	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 336		µg/kg dry	336	20.1	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 336		µg/kg dry	336	77.7	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 336		µg/kg dry	336	33.9	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 170		µg/kg dry	170	31.4	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 170		µg/kg dry	170	27.3	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 170		µg/kg dry	170	43.2	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 336		µg/kg dry	336	38.0	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 336		µg/kg dry	336	33.7	1	"	"	"	"	"	X
86-74-8	Carbazole	< 170		µg/kg dry	170	39.1	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 336		µg/kg dry	336	39.5	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 170		µg/kg dry	170	21.0	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 336		µg/kg dry	336	46.0	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 170		µg/kg dry	170	32.6	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 336		µg/kg dry	336	32.9	1	"	"	"	"	"	X
218-01-9	Chrysene	< 67.9		µg/kg dry	67.9	38.4	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 67.9		µg/kg dry	67.9	50.2	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 170		µg/kg dry	170	45.7	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 336		µg/kg dry	336	40.1	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 336		µg/kg dry	336	36.2	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 336		µg/kg dry	336	38.2	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 336		µg/kg dry	336	37.1	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 170		µg/kg dry	170	41.2	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 336		µg/kg dry	336	35.2	1	"	"	"	"	"	X

Sample Identification **TrenchB_0-6** SC59391-02	Client Project #	Matrix	Collection Date/Time	Received
	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
131-11-3	Dimethyl phthalate	< 336		µg/kg dry	336	37.7	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 336		µg/kg dry	336	26.6	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 336		µg/kg dry	336	35.9	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 336		µg/kg dry	336	48.1	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 336		µg/kg dry	336	34.8	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 170		µg/kg dry	170	40.7	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 170		µg/kg dry	170	34.7	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 336		µg/kg dry	336	50.0	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 67.9		µg/kg dry	67.9	39.8	1	"	"	"	"	"	X
86-73-7	Fluorene	< 67.9		µg/kg dry	67.9	43.9	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 170		µg/kg dry	170	42.7	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 170		µg/kg dry	170	42.7	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 170		µg/kg dry	170	42.8	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 170		µg/kg dry	170	38.4	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 67.9		µg/kg dry	67.9	46.4	1	"	"	"	"	"	X
78-59-1	Isophorone	< 170		µg/kg dry	170	26.1	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 67.9		µg/kg dry	67.9	47.5	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 336		µg/kg dry	336	27.0	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 336		µg/kg dry	336	26.4	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 67.9		µg/kg dry	67.9	39.2	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 336		µg/kg dry	336	30.4	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 336		µg/kg dry	336	31.0	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 170		µg/kg dry	170	44.8	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 170		µg/kg dry	170	39.3	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 170		µg/kg dry	170	29.7	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1340		µg/kg dry	1340	44.7	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 170		µg/kg dry	170	22.2	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 170		µg/kg dry	170	29.7	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 336		µg/kg dry	336	34.2	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 336		µg/kg dry	336	40.0	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 67.9		µg/kg dry	67.9	38.5	1	"	"	"	"	"	X
108-95-2	Phenol	< 336		µg/kg dry	336	34.0	1	"	"	"	"	"	X
129-00-0	Pyrene	< 67.9		µg/kg dry	67.9	37.4	1	"	"	"	"	"	X
110-86-1	Pyridine	< 336		µg/kg dry	336	79.5	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 336		µg/kg dry	336	41.3	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 67.9		µg/kg dry	67.9	37.4	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 336		µg/kg dry	336	34.7	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 170		µg/kg dry	170	41.5	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 336		µg/kg dry	336	35.7	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 336		µg/kg dry	336	40.0	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*41*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*66*			*30-130 %*			"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
4165-60-0	*Nitrobenzene-d5*	*57*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*64*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*70*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*73*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	< 13.8		mg/kg dry	13.8	11.5	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*70*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*81*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.30		mg/kg dry	3.30	0.178	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**20.0**		mg/kg dry	1.65	0.209	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**24.0**		mg/kg dry	1.10	0.130	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.550		mg/kg dry	0.550	0.0285	1	"	"	"	"	"	X
7440-47-3	Chromium	**11.1**		mg/kg dry	1.10	0.146	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.0312		mg/kg dry	0.0312	0.0087	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**5.13**		mg/kg dry	1.65	0.233	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.65		mg/kg dry	1.65	0.315	1	"	"	"	"	"	X
7704-34-9	Sulfur	**107**		mg/kg dry	27.5	1.88	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**96.6**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:37	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)							Initial weight: 27.79 g						
78-93-3	2-Butanone (MEK)	< 64.8	D	µg/kg dry	64.8	14.8	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (low level)			IS1				Initial weight: 8.62 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.10		µg/kg dry	3.10	2.02	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	**36.3**		µg/kg dry	31.0	6.95	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.10		µg/kg dry	3.10	1.86	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.10		µg/kg dry	3.10	2.07	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.10		µg/kg dry	3.10	2.07	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.10		µg/kg dry	3.10	1.76	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.10		µg/kg dry	3.10	2.28	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.10		µg/kg dry	3.10	2.37	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 6.21		µg/kg dry	6.21	1.01	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 6.21		µg/kg dry	6.21	3.33	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.10		µg/kg dry	3.10	2.50	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.10		µg/kg dry	3.10	2.45	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 6.21		µg/kg dry	6.21	2.18	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.10		µg/kg dry	3.10	1.96	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.10		µg/kg dry	3.10	2.27	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 6.21		µg/kg dry	6.21	2.28	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.10		µg/kg dry	3.10	2.09	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 6.21		µg/kg dry	6.21	2.38	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.10		µg/kg dry	3.10	2.47	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.10		µg/kg dry	3.10	2.69	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 6.21		µg/kg dry	6.21	2.63	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.10		µg/kg dry	3.10	2.06	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.10		µg/kg dry	3.10	2.23	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.10		µg/kg dry	3.10	1.83	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.10		µg/kg dry	3.10	2.88	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.10		µg/kg dry	3.10	2.49	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.10		µg/kg dry	3.10	2.94	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 6.21		µg/kg dry	6.21	1.66	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.10		µg/kg dry	3.10	2.10	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.10		µg/kg dry	3.10	2.09	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.10		µg/kg dry	3.10	1.90	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.10		µg/kg dry	3.10	1.79	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.10		µg/kg dry	3.10	1.93	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.10		µg/kg dry	3.10	2.06	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.10		µg/kg dry	3.10	2.37	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.62 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 3.10		µg/kg dry	3.10	2.14	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.10		µg/kg dry	3.10	2.11	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.10		µg/kg dry	3.10	2.02	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.10		µg/kg dry	3.10	2.36	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.10		µg/kg dry	3.10	2.22	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 6.21		µg/kg dry	6.21	3.12	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 6.21		µg/kg dry	6.21	1.83	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.10		µg/kg dry	3.10	2.35	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.10		µg/kg dry	3.10	3.05	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.10		µg/kg dry	3.10	1.72	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 6.21		µg/kg dry	6.21	2.01	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 6.21		µg/kg dry	6.21	1.66	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.10		µg/kg dry	3.10	2.81	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.10		µg/kg dry	3.10	2.63	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.10		µg/kg dry	3.10	2.40	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.10		µg/kg dry	3.10	2.33	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.10		µg/kg dry	3.10	2.84	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.10		µg/kg dry	3.10	1.73	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.10		µg/kg dry	3.10	1.97	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.10		µg/kg dry	3.10	2.62	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.10		µg/kg dry	3.10	2.86	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.10		µg/kg dry	3.10	2.95	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.10		µg/kg dry	3.10	2.12	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.10		µg/kg dry	3.10	2.34	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.10		µg/kg dry	3.10	2.09	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.10		µg/kg dry	3.10	2.37	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.10		µg/kg dry	3.10	2.73	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.10		µg/kg dry	3.10	2.63	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.10		µg/kg dry	3.10	2.64	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.10		µg/kg dry	3.10	1.89	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 6.21		µg/kg dry	6.21	4.24	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.10		µg/kg dry	3.10	2.27	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 6.21		µg/kg dry	6.21	1.57	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.10		µg/kg dry	3.10	1.63	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.10		µg/kg dry	3.10	2.45	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.10		µg/kg dry	3.10	2.04	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.10		µg/kg dry	3.10	2.22	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 62.1		µg/kg dry	62.1	16.6	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 62.1		µg/kg dry	62.1	19.3	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 15.5		µg/kg dry	15.5	2.29	1	"	"	"	"	"	X
64-17-5	Ethanol	< 621		µg/kg dry	621	38.5	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.62 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
460-00-4	*4-Bromofluorobenzene*	*67*	SGCMS VOC		*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*92*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*114*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
83-32-9	Acenaphthene	< 71.0		µg/kg dry	71.0	37.7	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**77.4**		µg/kg dry	71.0	37.1	1	"	"	"	"	"	X
62-53-3	Aniline	< 351		µg/kg dry	351	22.4	1	"	"	"	"	"	X
120-12-7	Anthracene	**134**		µg/kg dry	71.0	40.9	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 351		µg/kg dry	351	38.1	1	"	"	"	"	"	
92-87-5	Benzidine	< 703		µg/kg dry	703	22.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**279**		µg/kg dry	71.0	39.9	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**318**		µg/kg dry	71.0	48.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**476**		µg/kg dry	71.0	53.5	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**508**		µg/kg dry	71.0	50.2	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**188**		µg/kg dry	71.0	60.7	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 351		µg/kg dry	351	21.1	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 351		µg/kg dry	351	81.3	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 351		µg/kg dry	351	35.5	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 178		µg/kg dry	178	32.9	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 178		µg/kg dry	178	28.5	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 178		µg/kg dry	178	45.3	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 351		µg/kg dry	351	39.7	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 351		µg/kg dry	351	35.2	1	"	"	"	"	"	X
86-74-8	Carbazole	< 178		µg/kg dry	178	40.9	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 351		µg/kg dry	351	41.3	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 178		µg/kg dry	178	21.9	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 351		µg/kg dry	351	48.1	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 178		µg/kg dry	178	34.1	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 351		µg/kg dry	351	34.4	1	"	"	"	"	"	X
218-01-9	Chrysene	**310**		µg/kg dry	71.0	40.1	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	**159**		µg/kg dry	71.0	52.5	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 178		µg/kg dry	178	47.8	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 351		µg/kg dry	351	42.0	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 351		µg/kg dry	351	37.9	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 351		µg/kg dry	351	39.9	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 351		µg/kg dry	351	38.9	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 178		µg/kg dry	178	43.1	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 351		µg/kg dry	351	36.8	1	"	"	"	"	"	X

***This laboratory report is not valid without an authorized signature on the cover page*.**

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
131-11-3	Dimethyl phthalate	< 351		µg/kg dry	351	39.5	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 351		µg/kg dry	351	27.8	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 351		µg/kg dry	351	37.6	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 351		µg/kg dry	351	50.4	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 351		µg/kg dry	351	36.4	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 178		µg/kg dry	178	42.6	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 178		µg/kg dry	178	36.3	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 351		µg/kg dry	351	52.3	1	"	"	"	"	"	X
206-44-0	Fluoranthene	**107**		µg/kg dry	71.0	41.6	1	"	"	"	"	"	X
86-73-7	Fluorene	< 71.0		µg/kg dry	71.0	45.9	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 178		µg/kg dry	178	44.7	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 178		µg/kg dry	178	44.7	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 178		µg/kg dry	178	44.8	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 178		µg/kg dry	178	40.1	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**395**		µg/kg dry	71.0	48.6	1	"	"	"	"	"	X
78-59-1	Isophorone	< 178		µg/kg dry	178	27.4	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	**96.2**		µg/kg dry	71.0	49.7	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 351		µg/kg dry	351	28.2	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 351		µg/kg dry	351	27.6	1	"	"	"	"	"	X
91-20-3	Naphthalene	**120**		µg/kg dry	71.0	41.0	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 351		µg/kg dry	351	31.8	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 351		µg/kg dry	351	32.5	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 178		µg/kg dry	178	46.8	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 178		µg/kg dry	178	41.1	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 178		µg/kg dry	178	31.1	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1410		µg/kg dry	1410	46.7	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 178		µg/kg dry	178	23.2	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 178		µg/kg dry	178	31.1	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 351		µg/kg dry	351	35.8	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 351		µg/kg dry	351	41.8	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**303**		µg/kg dry	71.0	40.2	1	"	"	"	"	"	X
108-95-2	Phenol	< 351		µg/kg dry	351	35.6	1	"	"	"	"	"	X
129-00-0	Pyrene	**109**		µg/kg dry	71.0	39.2	1	"	"	"	"	"	X
110-86-1	Pyridine	< 351		µg/kg dry	351	83.2	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 351		µg/kg dry	351	43.2	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 71.0		µg/kg dry	71.0	39.2	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 351		µg/kg dry	351	36.3	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 178		µg/kg dry	178	43.4	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 351		µg/kg dry	351	37.4	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 351		µg/kg dry	351	41.8	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*52*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
4165-60-0	*Nitrobenzene-d5*	*73*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*85*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*73*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*68*			*30-130 %*			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Fingerprinting by GC

Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Total Petroleum Hydrocarbons	**39.4**		mg/kg dry	13.4	11.2	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	

Surrogate recoveries:

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
84-15-1	*o-Terphenyl*	*73*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*85*			*40-140 %*			"	"	"	"	"	

Total Metals by EPA 6000/7000 Series Methods

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7440-22-4	Silver	< 3.08		mg/kg dry	3.08	0.167	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**6.56**		mg/kg dry	1.54	0.195	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**57.2**		mg/kg dry	1.03	0.121	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.514		mg/kg dry	0.514	0.0266	1	"	"	"	"	"	X
7440-47-3	Chromium	**12.3**		mg/kg dry	1.03	0.137	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0974**		mg/kg dry	0.0296	0.0082	1	SW846 7471B	"	29-Sep-20	edt	2001785	X

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7439-92-1	Lead	**43.9**		mg/kg dry	1.54	0.218	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.54		mg/kg dry	1.54	0.294	1	"	"	"	"	"	X
7704-34-9	Sulfur	**174**		mg/kg dry	25.7	1.76	1	"	"	23-Sep-20	"	"	

General Chemistry Parameters

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	% Solids	**93.4**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	

Subcontracted Analyses

Prepared by method 7.3.3

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:40	2337	551420	

Prepared by method 7.3.4

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260
Prepared by method SW846 5035A Soil (high level) — Initial weight: 27.16 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
78-93-3	2-Butanone (MEK)	< 65.7	D	µg/kg dry	65.7	15.0	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
	Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*112*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260 IS1
Prepared by method SW846 5035A Soil (low level) — Initial weight: 7.24 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.69		µg/kg dry	3.69	2.40	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 36.9		µg/kg dry	36.9	8.26	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.69		µg/kg dry	3.69	2.21	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.69		µg/kg dry	3.69	2.46	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.69		µg/kg dry	3.69	2.45	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.69		µg/kg dry	3.69	2.09	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.69		µg/kg dry	3.69	2.71	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.69		µg/kg dry	3.69	2.82	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 7.37		µg/kg dry	7.37	1.20	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 7.37		µg/kg dry	7.37	3.95	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.69		µg/kg dry	3.69	2.97	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.69		µg/kg dry	3.69	2.90	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 7.37		µg/kg dry	7.37	2.59	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.69		µg/kg dry	3.69	2.32	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.69		µg/kg dry	3.69	2.70	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 7.37		µg/kg dry	7.37	2.71	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.69		µg/kg dry	3.69	2.48	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 7.37		µg/kg dry	7.37	2.83	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.69		µg/kg dry	3.69	2.93	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.69		µg/kg dry	3.69	3.20	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 7.37		µg/kg dry	7.37	3.13	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.69		µg/kg dry	3.69	2.44	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.69		µg/kg dry	3.69	2.65	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.69		µg/kg dry	3.69	2.17	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.69		µg/kg dry	3.69	3.42	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.69		µg/kg dry	3.69	2.96	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.69		µg/kg dry	3.69	3.49	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 7.37		µg/kg dry	7.37	1.98	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.69		µg/kg dry	3.69	2.50	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.69		µg/kg dry	3.69	2.48	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.69		µg/kg dry	3.69	2.26	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.69		µg/kg dry	3.69	2.13	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.69		µg/kg dry	3.69	2.29	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.69		µg/kg dry	3.69	2.44	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.69		µg/kg dry	3.69	2.82	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 7.24 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
594-20-7	2,2-Dichloropropane	< 3.69		µg/kg dry	3.69	2.54	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.69		µg/kg dry	3.69	2.51	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.69		µg/kg dry	3.69	2.40	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.69		µg/kg dry	3.69	2.80	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.69		µg/kg dry	3.69	2.63	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 7.37		µg/kg dry	7.37	3.71	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 7.37		µg/kg dry	7.37	2.17	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.69		µg/kg dry	3.69	2.79	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.69		µg/kg dry	3.69	3.62	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.69		µg/kg dry	3.69	2.04	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 7.37		µg/kg dry	7.37	2.38	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 7.37		µg/kg dry	7.37	1.98	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.69		µg/kg dry	3.69	3.33	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.69		µg/kg dry	3.69	3.12	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.69		µg/kg dry	3.69	2.85	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.69		µg/kg dry	3.69	2.76	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.69		µg/kg dry	3.69	3.38	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.69		µg/kg dry	3.69	2.05	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.69		µg/kg dry	3.69	2.34	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.69		µg/kg dry	3.69	3.11	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.69		µg/kg dry	3.69	3.40	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.69		µg/kg dry	3.69	3.50	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.69		µg/kg dry	3.69	2.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.69		µg/kg dry	3.69	2.78	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.69		µg/kg dry	3.69	2.48	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.69		µg/kg dry	3.69	2.82	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.69		µg/kg dry	3.69	3.24	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.69		µg/kg dry	3.69	3.12	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.69		µg/kg dry	3.69	3.13	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.69		µg/kg dry	3.69	2.25	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 7.37		µg/kg dry	7.37	5.03	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.69		µg/kg dry	3.69	2.69	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 7.37		µg/kg dry	7.37	1.86	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.69		µg/kg dry	3.69	1.94	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.69		µg/kg dry	3.69	2.91	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.69		µg/kg dry	3.69	2.43	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.69		µg/kg dry	3.69	2.63	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 73.7		µg/kg dry	73.7	19.8	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 73.7		µg/kg dry	73.7	22.9	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 18.4		µg/kg dry	18.4	2.72	1	"	"	"	"	"	X
64-17-5	Ethanol	< 737		µg/kg dry	737	45.7	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Volatile Organic Compounds												
	Volatile Organic Compounds by SW846 8260		IS1										
							Initial weight: 7.24 g						
460-00-4	*4-Bromofluorobenzene*	*77*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*94*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*114*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*107*			*70-130 %*			"	"	"	"	"	
	Semivolatile Organic Compounds by GCMS												
	Semivolatile Organic Compounds Prepared by method SW846 3546		R01										
83-32-9	Acenaphthene	< 355		µg/kg dry	355	189	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**1,420**		µg/kg dry	355	185	1	"	"	"	"	"	X
62-53-3	Aniline	< 1760		µg/kg dry	1760	112	1	"	"	"	"	"	X
120-12-7	Anthracene	**1,100**		µg/kg dry	355	205	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 1760		µg/kg dry	1760	191	1	"	"	"	"	"	
92-87-5	Benzidine	< 3520		µg/kg dry	3520	112	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**6,460**		µg/kg dry	355	200	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**6,640**		µg/kg dry	355	243	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**8,170**		µg/kg dry	355	268	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**9,550**		µg/kg dry	355	251	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**3,640**		µg/kg dry	355	304	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 1760		µg/kg dry	1760	106	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 1760		µg/kg dry	1760	407	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 1760		µg/kg dry	1760	177	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 890		µg/kg dry	890	165	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 890		µg/kg dry	890	143	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 890		µg/kg dry	890	226	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 1760		µg/kg dry	1760	199	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 1760		µg/kg dry	1760	176	1	"	"	"	"	"	X
86-74-8	Carbazole	< 890		µg/kg dry	890	205	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 1760		µg/kg dry	1760	207	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 890		µg/kg dry	890	110	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 1760		µg/kg dry	1760	241	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 890		µg/kg dry	890	171	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 1760		µg/kg dry	1760	172	1	"	"	"	"	"	X
218-01-9	Chrysene	**6,770**		µg/kg dry	355	201	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	**2,450**		µg/kg dry	355	263	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 890		µg/kg dry	890	239	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1760		µg/kg dry	1760	210	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1760		µg/kg dry	1760	190	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1760		µg/kg dry	1760	200	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 1760		µg/kg dry	1760	195	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 890		µg/kg dry	890	216	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 1760		µg/kg dry	1760	184	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
131-11-3	Dimethyl phthalate	< 1760		µg/kg dry	1760	198	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 1760		µg/kg dry	1760	139	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 1760		µg/kg dry	1760	188	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 1760		µg/kg dry	1760	252	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 1760		µg/kg dry	1760	182	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 890		µg/kg dry	890	213	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 890		µg/kg dry	890	182	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 1760		µg/kg dry	1760	262	1	"	"	"	"	"	X
206-44-0	Fluoranthene	**6,580**		µg/kg dry	355	208	1	"	"	"	"	"	X
86-73-7	Fluorene	< 355		µg/kg dry	355	230	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 890		µg/kg dry	890	224	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 890		µg/kg dry	890	224	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 890		µg/kg dry	890	224	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 890		µg/kg dry	890	201	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**7,620**		µg/kg dry	355	243	1	"	"	"	"	"	X
78-59-1	Isophorone	< 890		µg/kg dry	890	137	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 355		µg/kg dry	355	249	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 1760		µg/kg dry	1760	141	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 1760		µg/kg dry	1760	138	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 355		µg/kg dry	355	205	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 1760		µg/kg dry	1760	159	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 1760		µg/kg dry	1760	163	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 890		µg/kg dry	890	234	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 890		µg/kg dry	890	206	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 890		µg/kg dry	890	156	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 7030		µg/kg dry	7030	234	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 890		µg/kg dry	890	116	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 890		µg/kg dry	890	156	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 1760		µg/kg dry	1760	179	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 1760		µg/kg dry	1760	209	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**1,720**		µg/kg dry	355	201	1	"	"	"	"	"	X
108-95-2	Phenol	< 1760		µg/kg dry	1760	178	1	"	"	"	"	"	X
129-00-0	Pyrene	**6,930**		µg/kg dry	355	196	1	"	"	"	"	"	X
110-86-1	Pyridine	< 1760		µg/kg dry	1760	416	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1760		µg/kg dry	1760	216	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 355		µg/kg dry	355	196	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 1760		µg/kg dry	1760	182	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 890		µg/kg dry	890	217	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 1760		µg/kg dry	1760	187	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 1760		µg/kg dry	1760	209	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*52*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*89*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
4165-60-0	*Nitrobenzene-d5*	*89*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*89*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*78*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*73*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546			R01										
	Total Petroleum Hydrocarbons	**1,220**		mg/kg dry	27.3	22.8	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*80*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*219*	S02		*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.45		mg/kg dry	3.45	0.186	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**11.1**		mg/kg dry	1.72	0.218	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**38.4**		mg/kg dry	1.15	0.136	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.575		mg/kg dry	0.575	0.0298	1	"	"	"	"	"	X
7440-47-3	Chromium	**10.1**		mg/kg dry	1.15	0.153	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0870**		mg/kg dry	0.0306	0.0085	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**44.2**		mg/kg dry	1.72	0.244	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.72		mg/kg dry	1.72	0.329	1	"	"	"	"	"	X
7704-34-9	Sulfur	**318**		mg/kg dry	28.7	1.97	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**93.7**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:42	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)							Initial weight: 30.15 g						
78-93-3	2-Butanone (MEK)	< 68.3	D	µg/kg dry	68.3	15.6	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (low level)			IS1				Initial weight: 9.45 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 2.97		µg/kg dry	2.97	1.94	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 29.7		µg/kg dry	29.7	6.66	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 2.97		µg/kg dry	2.97	1.78	1	"	"	"	"	"	X
71-43-2	Benzene	< 2.97		µg/kg dry	2.97	1.99	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 2.97		µg/kg dry	2.97	1.98	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 2.97		µg/kg dry	2.97	1.69	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 2.97		µg/kg dry	2.97	2.18	1	"	"	"	"	"	X
75-25-2	Bromoform	< 2.97		µg/kg dry	2.97	2.27	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 5.95		µg/kg dry	5.95	0.97	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 5.95		µg/kg dry	5.95	3.19	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 2.97		µg/kg dry	2.97	2.40	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 2.97		µg/kg dry	2.97	2.34	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 5.95		µg/kg dry	5.95	2.09	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 2.97		µg/kg dry	2.97	1.87	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 2.97		µg/kg dry	2.97	2.18	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 5.95		µg/kg dry	5.95	2.18	1	"	"	"	"	"	X
67-66-3	Chloroform	< 2.97		µg/kg dry	2.97	2.00	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 5.95		µg/kg dry	5.95	2.28	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 2.97		µg/kg dry	2.97	2.37	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 2.97		µg/kg dry	2.97	2.58	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 5.95		µg/kg dry	5.95	2.52	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 2.97		µg/kg dry	2.97	1.97	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 2.97		µg/kg dry	2.97	2.14	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 2.97		µg/kg dry	2.97	1.75	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 2.97		µg/kg dry	2.97	2.76	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 2.97		µg/kg dry	2.97	2.38	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 2.97		µg/kg dry	2.97	2.82	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 5.95		µg/kg dry	5.95	1.59	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 2.97		µg/kg dry	2.97	2.02	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 2.97		µg/kg dry	2.97	2.00	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 2.97		µg/kg dry	2.97	1.82	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 2.97		µg/kg dry	2.97	1.72	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 2.97		µg/kg dry	2.97	1.85	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 2.97		µg/kg dry	2.97	1.97	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 2.97		µg/kg dry	2.97	2.27	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 9.45 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 2.97		µg/kg dry	2.97	2.05	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 2.97		µg/kg dry	2.97	2.02	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 2.97		µg/kg dry	2.97	1.94	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 2.97		µg/kg dry	2.97	2.26	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 2.97		µg/kg dry	2.97	2.12	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 5.95		µg/kg dry	5.95	2.99	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 5.95		µg/kg dry	5.95	1.75	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 2.97		µg/kg dry	2.97	2.25	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 2.97		µg/kg dry	2.97	2.92	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 2.97		µg/kg dry	2.97	1.65	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 5.95		µg/kg dry	5.95	1.92	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 5.95		µg/kg dry	5.95	1.59	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 2.97		µg/kg dry	2.97	2.69	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 2.97		µg/kg dry	2.97	2.52	1	"	"	"	"	"	X
100-42-5	Styrene	< 2.97		µg/kg dry	2.97	2.30	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 2.97		µg/kg dry	2.97	2.23	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 2.97		µg/kg dry	2.97	2.72	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 2.97		µg/kg dry	2.97	1.65	1	"	"	"	"	"	X
108-88-3	Toluene	< 2.97		µg/kg dry	2.97	1.89	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 2.97		µg/kg dry	2.97	2.51	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 2.97		µg/kg dry	2.97	2.74	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 2.97		µg/kg dry	2.97	2.82	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 2.97		µg/kg dry	2.97	2.03	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 2.97		µg/kg dry	2.97	2.24	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 2.97		µg/kg dry	2.97	2.00	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 2.97		µg/kg dry	2.97	2.27	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 2.97		µg/kg dry	2.97	2.62	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 2.97		µg/kg dry	2.97	2.52	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 2.97		µg/kg dry	2.97	2.53	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 2.97		µg/kg dry	2.97	1.81	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 5.95		µg/kg dry	5.95	4.06	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 2.97		µg/kg dry	2.97	2.17	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 5.95		µg/kg dry	5.95	1.50	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 2.97		µg/kg dry	2.97	1.56	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 2.97		µg/kg dry	2.97	2.35	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 2.97		µg/kg dry	2.97	1.96	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 2.97		µg/kg dry	2.97	2.12	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 59.5		µg/kg dry	59.5	15.9	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 59.5		µg/kg dry	59.5	18.5	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 14.9		µg/kg dry	14.9	2.19	1	"	"	"	"	"	X
64-17-5	Ethanol	< 595		µg/kg dry	595	36.9	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
							Initial weight: 9.45 g						
460-00-4	*4-Bromofluorobenzene*	*94*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*105*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*119*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*109*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546													
83-32-9	Acenaphthene	< 74.2		µg/kg dry	74.2	39.4	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**114**		µg/kg dry	74.2	38.7	1	"	"	"	"	"	X
62-53-3	Aniline	< 367		µg/kg dry	367	23.4	1	"	"	"	"	"	X
120-12-7	Anthracene	**247**		µg/kg dry	74.2	42.7	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 367		µg/kg dry	367	39.8	1	"	"	"	"	"	
92-87-5	Benzidine	< 734		µg/kg dry	734	23.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**178**		µg/kg dry	74.2	41.7	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**262**		µg/kg dry	74.2	50.7	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**157**		µg/kg dry	74.2	55.9	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**185**		µg/kg dry	74.2	52.4	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**122**		µg/kg dry	74.2	63.4	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 367		µg/kg dry	367	22.0	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 367		µg/kg dry	367	85.0	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 367		µg/kg dry	367	37.1	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 186		µg/kg dry	186	34.4	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 186		µg/kg dry	186	29.8	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 186		µg/kg dry	186	47.3	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 367		µg/kg dry	367	41.5	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 367		µg/kg dry	367	36.8	1	"	"	"	"	"	X
86-74-8	Carbazole	< 186		µg/kg dry	186	42.7	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 367		µg/kg dry	367	43.2	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 186		µg/kg dry	186	22.9	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 367		µg/kg dry	367	50.3	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 186		µg/kg dry	186	35.6	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 367		µg/kg dry	367	35.9	1	"	"	"	"	"	X
218-01-9	Chrysene	**157**		µg/kg dry	74.2	42.0	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 74.2		µg/kg dry	74.2	54.9	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 186		µg/kg dry	186	50.0	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 367		µg/kg dry	367	43.8	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 367		µg/kg dry	367	39.6	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 367		µg/kg dry	367	41.7	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 367		µg/kg dry	367	40.6	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 186		µg/kg dry	186	45.1	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 367		µg/kg dry	367	38.5	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
131-11-3	Dimethyl phthalate	< 367		µg/kg dry	367	41.3	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 367		µg/kg dry	367	29.0	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 367		µg/kg dry	367	39.3	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 367		µg/kg dry	367	52.6	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 367		µg/kg dry	367	38.1	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 186		µg/kg dry	186	44.5	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 186		µg/kg dry	186	37.9	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 367		µg/kg dry	367	54.6	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 74.2		µg/kg dry	74.2	43.5	1	"	"	"	"	"	X
86-73-7	Fluorene	< 74.2		µg/kg dry	74.2	48.0	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 186		µg/kg dry	186	46.7	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 186		µg/kg dry	186	46.7	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 186		µg/kg dry	186	46.9	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 186		µg/kg dry	186	42.0	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**151**		µg/kg dry	74.2	50.7	1	"	"	"	"	"	X
78-59-1	Isophorone	< 186		µg/kg dry	186	28.6	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 74.2		µg/kg dry	74.2	52.0	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 367		µg/kg dry	367	29.5	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 367		µg/kg dry	367	28.8	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 74.2		µg/kg dry	74.2	42.8	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 367		µg/kg dry	367	33.3	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 367		µg/kg dry	367	33.9	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 186		µg/kg dry	186	49.0	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 186		µg/kg dry	186	43.0	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 186		µg/kg dry	186	32.5	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1470		µg/kg dry	1470	48.9	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 186		µg/kg dry	186	24.3	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 186		µg/kg dry	186	32.5	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 367		µg/kg dry	367	37.4	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 367		µg/kg dry	367	43.7	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 74.2		µg/kg dry	74.2	42.1	1	"	"	"	"	"	X
108-95-2	Phenol	< 367		µg/kg dry	367	37.2	1	"	"	"	"	"	X
129-00-0	Pyrene	< 74.2		µg/kg dry	74.2	41.0	1	"	"	"	"	"	X
110-86-1	Pyridine	< 367		µg/kg dry	367	86.9	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 367		µg/kg dry	367	45.2	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 74.2		µg/kg dry	74.2	41.0	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 367		µg/kg dry	367	37.9	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 186		µg/kg dry	186	45.4	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 367		µg/kg dry	367	39.1	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 367		µg/kg dry	367	43.7	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*52*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*86*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
4165-60-0	*Nitrobenzene-d5*	*75*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*90*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*71*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*66*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	**39.9**		mg/kg dry	14.7	12.3	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*80*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*94*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.58		mg/kg dry	3.58	0.193	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**7.62**		mg/kg dry	1.79	0.227	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**25.5**		mg/kg dry	1.19	0.141	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.597		mg/kg dry	0.597	0.0309	1	"	"	"	"	"	X
7440-47-3	Chromium	**8.84**		mg/kg dry	1.19	0.159	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.0367		mg/kg dry	0.0367	0.0102	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**5.21**		mg/kg dry	1.79	0.253	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.79		mg/kg dry	1.79	0.341	1	"	"	"	"	"	X
7704-34-9	Sulfur	**60.9**		mg/kg dry	29.8	2.04	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**89.0**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:43	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)							Initial weight: 27.63 g						
78-93-3	2-Butanone (MEK)	< 65.1	D	µg/kg dry	65.1	14.9	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*112*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*112*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (low level)			IS1				Initial weight: 8.48 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.16		µg/kg dry	3.16	2.06	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 31.6		µg/kg dry	31.6	7.07	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.16		µg/kg dry	3.16	1.89	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.16		µg/kg dry	3.16	2.11	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.16		µg/kg dry	3.16	2.10	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.16		µg/kg dry	3.16	1.79	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.16		µg/kg dry	3.16	2.32	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.16		µg/kg dry	3.16	2.41	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 6.31		µg/kg dry	6.31	1.03	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 6.31		µg/kg dry	6.31	3.38	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.16		µg/kg dry	3.16	2.54	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.16		µg/kg dry	3.16	2.49	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 6.31		µg/kg dry	6.31	2.21	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.16		µg/kg dry	3.16	1.99	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.16		µg/kg dry	3.16	2.31	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 6.31		µg/kg dry	6.31	2.32	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.16		µg/kg dry	3.16	2.12	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 6.31		µg/kg dry	6.31	2.42	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.16		µg/kg dry	3.16	2.51	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.16		µg/kg dry	3.16	2.74	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 6.31		µg/kg dry	6.31	2.68	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.16		µg/kg dry	3.16	2.09	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.16		µg/kg dry	3.16	2.27	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.16		µg/kg dry	3.16	1.86	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.16		µg/kg dry	3.16	2.93	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.16		µg/kg dry	3.16	2.53	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.16		µg/kg dry	3.16	2.99	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 6.31		µg/kg dry	6.31	1.69	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.16		µg/kg dry	3.16	2.14	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.16		µg/kg dry	3.16	2.13	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.16		µg/kg dry	3.16	1.93	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.16		µg/kg dry	3.16	1.82	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.16		µg/kg dry	3.16	1.96	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.16		µg/kg dry	3.16	2.09	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.16		µg/kg dry	3.16	2.41	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.48 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 3.16		µg/kg dry	3.16	2.18	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.16		µg/kg dry	3.16	2.15	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.16		µg/kg dry	3.16	2.06	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.16		µg/kg dry	3.16	2.40	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.16		µg/kg dry	3.16	2.25	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 6.31		µg/kg dry	6.31	3.17	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 6.31		µg/kg dry	6.31	1.86	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.16		µg/kg dry	3.16	2.39	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.16		µg/kg dry	3.16	3.10	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.16		µg/kg dry	3.16	1.75	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 6.31		µg/kg dry	6.31	2.04	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 6.31		µg/kg dry	6.31	1.69	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.16		µg/kg dry	3.16	2.85	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.16		µg/kg dry	3.16	2.67	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.16		µg/kg dry	3.16	2.44	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.16		µg/kg dry	3.16	2.37	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.16		µg/kg dry	3.16	2.89	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.16		µg/kg dry	3.16	1.75	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.16		µg/kg dry	3.16	2.00	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.16		µg/kg dry	3.16	2.66	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.16		µg/kg dry	3.16	2.91	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.16		µg/kg dry	3.16	3.00	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.16		µg/kg dry	3.16	2.15	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.16		µg/kg dry	3.16	2.38	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.16		µg/kg dry	3.16	2.12	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.16		µg/kg dry	3.16	2.41	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.16		µg/kg dry	3.16	2.78	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.16		µg/kg dry	3.16	2.67	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.16		µg/kg dry	3.16	2.68	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.16		µg/kg dry	3.16	1.92	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 6.31		µg/kg dry	6.31	4.31	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.16		µg/kg dry	3.16	2.30	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 6.31		µg/kg dry	6.31	1.60	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.16		µg/kg dry	3.16	1.66	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.16		µg/kg dry	3.16	2.49	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.16		µg/kg dry	3.16	2.08	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.16		µg/kg dry	3.16	2.25	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 63.1		µg/kg dry	63.1	16.9	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 63.1		µg/kg dry	63.1	19.6	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 15.8		µg/kg dry	15.8	2.33	1	"	"	"	"	"	X
64-17-5	Ethanol	< 631		µg/kg dry	631	39.1	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.48 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
460-00-4	*4-Bromofluorobenzene*	*75*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*97*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*114*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*111*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds
Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
83-32-9	Acenaphthene	< 70.1		µg/kg dry	70.1	37.2	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	< 70.1		µg/kg dry	70.1	36.6	1	"	"	"	"	"	X
62-53-3	Aniline	< 347		µg/kg dry	347	22.1	1	"	"	"	"	"	X
120-12-7	Anthracene	**91.8**		µg/kg dry	70.1	40.4	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 347		µg/kg dry	347	37.6	1	"	"	"	"	"	
92-87-5	Benzidine	< 694		µg/kg dry	694	22.1	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**174**		µg/kg dry	70.1	39.4	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**192**		µg/kg dry	70.1	48.0	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**311**		µg/kg dry	70.1	52.8	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**325**		µg/kg dry	70.1	49.5	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**211**		µg/kg dry	70.1	59.9	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 347		µg/kg dry	347	20.8	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 347		µg/kg dry	347	80.3	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 347		µg/kg dry	347	35.0	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 176		µg/kg dry	176	32.5	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 176		µg/kg dry	176	28.2	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 176		µg/kg dry	176	44.7	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 347		µg/kg dry	347	39.2	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 347		µg/kg dry	347	34.8	1	"	"	"	"	"	X
86-74-8	Carbazole	< 176		µg/kg dry	176	40.4	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 347		µg/kg dry	347	40.8	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 176		µg/kg dry	176	21.7	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 347		µg/kg dry	347	47.5	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 176		µg/kg dry	176	33.7	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 347		µg/kg dry	347	34.0	1	"	"	"	"	"	X
218-01-9	Chrysene	**218**		µg/kg dry	70.1	39.6	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	**111**		µg/kg dry	70.1	51.8	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 176		µg/kg dry	176	47.2	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 347		µg/kg dry	347	41.4	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 347		µg/kg dry	347	37.4	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 347		µg/kg dry	347	39.4	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 347		µg/kg dry	347	38.4	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 176		µg/kg dry	176	42.6	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 347		µg/kg dry	347	36.4	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
131-11-3	Dimethyl phthalate	< 347		µg/kg dry	347	39.0	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 347		µg/kg dry	347	27.4	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 347		µg/kg dry	347	37.1	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 347		µg/kg dry	347	49.7	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 347		µg/kg dry	347	36.0	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 176		µg/kg dry	176	42.1	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 176		µg/kg dry	176	35.9	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 347		µg/kg dry	347	51.6	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 70.1		µg/kg dry	70.1	41.1	1	"	"	"	"	"	X
86-73-7	Fluorene	< 70.1		µg/kg dry	70.1	45.3	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 176		µg/kg dry	176	44.2	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 176		µg/kg dry	176	44.2	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 176		µg/kg dry	176	44.3	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 176		µg/kg dry	176	39.6	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**267**		µg/kg dry	70.1	48.0	1	"	"	"	"	"	X
78-59-1	Isophorone	< 176		µg/kg dry	176	27.0	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	**73.6**		µg/kg dry	70.1	49.1	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 347		µg/kg dry	347	27.9	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 347		µg/kg dry	347	27.2	1	"	"	"	"	"	X
91-20-3	Naphthalene	**98.5**		µg/kg dry	70.1	40.5	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 347		µg/kg dry	347	31.4	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 347		µg/kg dry	347	32.1	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 176		µg/kg dry	176	46.3	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 176		µg/kg dry	176	40.6	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 176		µg/kg dry	176	30.7	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1390		µg/kg dry	1390	46.2	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 176		µg/kg dry	176	22.9	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 176		µg/kg dry	176	30.7	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 347		µg/kg dry	347	35.3	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 347		µg/kg dry	347	41.3	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**285**		µg/kg dry	70.1	39.8	1	"	"	"	"	"	X
108-95-2	Phenol	< 347		µg/kg dry	347	35.1	1	"	"	"	"	"	X
129-00-0	Pyrene	< 70.1		µg/kg dry	70.1	38.7	1	"	"	"	"	"	X
110-86-1	Pyridine	< 347		µg/kg dry	347	82.1	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 347		µg/kg dry	347	42.7	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 70.1		µg/kg dry	70.1	38.7	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 347		µg/kg dry	347	35.9	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 176		µg/kg dry	176	42.9	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 347		µg/kg dry	347	36.9	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 347		µg/kg dry	347	41.3	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*49*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*76*			*30-130 %*			"	"	"	"	"	

***This laboratory report is not valid without an authorized signature on the cover page*.**

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
4165-60-0	*Nitrobenzene-d5*	*74*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*82*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*74*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*60*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	**26.2**		mg/kg dry	13.7	11.5	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*78*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*89*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.33		mg/kg dry	3.33	0.180	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**9.30**		mg/kg dry	1.66	0.211	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**45.9**		mg/kg dry	1.11	0.131	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.555		mg/kg dry	0.555	0.0287	1	"	"	"	"	"	X
7440-47-3	Chromium	**11.7**		mg/kg dry	1.11	0.148	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0417**		mg/kg dry	0.0310	0.0086	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**39.2**		mg/kg dry	1.66	0.235	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.66		mg/kg dry	1.66	0.317	1	"	"	"	"	"	X
7704-34-9	Sulfur	**158**		mg/kg dry	27.7	1.90	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**93.4**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:44	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 25.79 g						
78-93-3	2-Butanone (MEK)	< 86.2	D	µg/kg dry	86.2	19.7	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260			IS1										
Prepared by method SW846 5035A Soil (low level)							Initial weight: 8.03 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.66		µg/kg dry	3.66	2.39	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 36.6		µg/kg dry	36.6	8.21	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.66		µg/kg dry	3.66	2.20	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.66		µg/kg dry	3.66	2.45	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.66		µg/kg dry	3.66	2.44	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.66		µg/kg dry	3.66	2.08	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.66		µg/kg dry	3.66	2.69	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.66		µg/kg dry	3.66	2.80	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 7.33		µg/kg dry	7.33	1.19	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 7.33		µg/kg dry	7.33	3.93	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.66		µg/kg dry	3.66	2.95	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.66		µg/kg dry	3.66	2.89	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 7.33		µg/kg dry	7.33	2.57	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.66		µg/kg dry	3.66	2.31	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.66		µg/kg dry	3.66	2.68	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 7.33		µg/kg dry	7.33	2.69	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.66		µg/kg dry	3.66	2.46	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 7.33		µg/kg dry	7.33	2.81	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.66		µg/kg dry	3.66	2.92	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.66		µg/kg dry	3.66	3.18	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 7.33		µg/kg dry	7.33	3.11	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.66		µg/kg dry	3.66	2.43	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.66		µg/kg dry	3.66	2.63	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.66		µg/kg dry	3.66	2.15	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.66		µg/kg dry	3.66	3.40	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.66		µg/kg dry	3.66	2.94	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.66		µg/kg dry	3.66	3.47	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 7.33		µg/kg dry	7.33	1.96	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.66		µg/kg dry	3.66	2.48	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.66		µg/kg dry	3.66	2.47	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.66		µg/kg dry	3.66	2.24	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.66		µg/kg dry	3.66	2.12	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.66		µg/kg dry	3.66	2.28	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.66		µg/kg dry	3.66	2.43	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.66		µg/kg dry	3.66	2.80	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.03 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
594-20-7	2,2-Dichloropropane	< 3.66		µg/kg dry	3.66	2.53	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.66		µg/kg dry	3.66	2.49	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.66		µg/kg dry	3.66	2.39	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.66		µg/kg dry	3.66	2.79	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.66		µg/kg dry	3.66	2.62	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 7.33		µg/kg dry	7.33	3.69	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 7.33		µg/kg dry	7.33	2.15	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.66		µg/kg dry	3.66	2.77	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.66		µg/kg dry	3.66	3.60	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.66		µg/kg dry	3.66	2.03	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 7.33		µg/kg dry	7.33	2.37	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 7.33		µg/kg dry	7.33	1.96	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.66		µg/kg dry	3.66	3.31	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.66		µg/kg dry	3.66	3.10	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.66		µg/kg dry	3.66	2.84	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.66		µg/kg dry	3.66	2.75	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.66		µg/kg dry	3.66	3.36	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.66		µg/kg dry	3.66	2.04	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.66		µg/kg dry	3.66	2.32	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.66		µg/kg dry	3.66	3.09	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.66		µg/kg dry	3.66	3.38	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.66		µg/kg dry	3.66	3.48	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.66		µg/kg dry	3.66	2.50	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.66		µg/kg dry	3.66	2.76	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.66		µg/kg dry	3.66	2.46	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.66		µg/kg dry	3.66	2.80	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.66		µg/kg dry	3.66	3.22	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.66		µg/kg dry	3.66	3.10	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.66		µg/kg dry	3.66	3.11	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.66		µg/kg dry	3.66	2.24	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 7.33		µg/kg dry	7.33	5.01	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.66		µg/kg dry	3.66	2.68	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 7.33		µg/kg dry	7.33	1.85	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.66		µg/kg dry	3.66	1.93	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.66		µg/kg dry	3.66	2.90	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.66		µg/kg dry	3.66	2.41	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.66		µg/kg dry	3.66	2.62	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 73.3		µg/kg dry	73.3	19.6	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 73.3		µg/kg dry	73.3	22.8	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 18.3		µg/kg dry	18.3	2.70	1	"	"	"	"	"	X
64-17-5	Ethanol	< 733		µg/kg dry	733	45.4	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.03 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*105*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*128*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*113*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds Prepared by method SW846 3546

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
83-32-9	Acenaphthene	< 76.9		µg/kg dry	76.9	40.8	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	< 76.9		µg/kg dry	76.9	40.1	1	"	"	"	"	"	X
62-53-3	Aniline	< 381		µg/kg dry	381	24.2	1	"	"	"	"	"	X
120-12-7	Anthracene	< 76.9		µg/kg dry	76.9	44.3	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 381		µg/kg dry	381	41.3	1	"	"	"	"	"	
92-87-5	Benzidine	< 761		µg/kg dry	761	24.2	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 76.9		µg/kg dry	76.9	43.2	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 76.9		µg/kg dry	76.9	52.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 76.9		µg/kg dry	76.9	57.9	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 76.9		µg/kg dry	76.9	54.3	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 76.9		µg/kg dry	76.9	65.7	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 381		µg/kg dry	381	22.8	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 381		µg/kg dry	381	88.1	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 381		µg/kg dry	381	38.4	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 193		µg/kg dry	193	35.6	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 193		µg/kg dry	193	30.9	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 193		µg/kg dry	193	49.0	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 381		µg/kg dry	381	43.0	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 381		µg/kg dry	381	38.2	1	"	"	"	"	"	X
86-74-8	Carbazole	< 193		µg/kg dry	193	44.3	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 381		µg/kg dry	381	44.7	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 193		µg/kg dry	193	23.8	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 381		µg/kg dry	381	52.1	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 193		µg/kg dry	193	36.9	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 381		µg/kg dry	381	37.2	1	"	"	"	"	"	X
218-01-9	Chrysene	< 76.9		µg/kg dry	76.9	43.5	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 76.9		µg/kg dry	76.9	56.8	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 193		µg/kg dry	193	51.8	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 381		µg/kg dry	381	45.4	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 381		µg/kg dry	381	41.0	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 381		µg/kg dry	381	43.2	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 381		µg/kg dry	381	42.1	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 193		µg/kg dry	193	46.7	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 381		µg/kg dry	381	39.9	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
131-11-3	Dimethyl phthalate	< 381		µg/kg dry	381	42.8	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 381		µg/kg dry	381	30.1	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 381		µg/kg dry	381	40.7	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 381		µg/kg dry	381	54.5	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 381		µg/kg dry	381	39.4	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 193		µg/kg dry	193	46.1	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 193		µg/kg dry	193	39.3	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 381		µg/kg dry	381	56.6	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 76.9		µg/kg dry	76.9	45.1	1	"	"	"	"	"	X
86-73-7	Fluorene	< 76.9		µg/kg dry	76.9	49.7	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 193		µg/kg dry	193	48.4	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 193		µg/kg dry	193	48.4	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 193		µg/kg dry	193	48.5	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 193		µg/kg dry	193	43.5	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 76.9		µg/kg dry	76.9	52.6	1	"	"	"	"	"	X
78-59-1	Isophorone	< 193		µg/kg dry	193	29.6	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 76.9		µg/kg dry	76.9	53.8	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 381		µg/kg dry	381	30.6	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 381		µg/kg dry	381	29.9	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 76.9		µg/kg dry	76.9	44.4	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 381		µg/kg dry	381	34.5	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 381		µg/kg dry	381	35.2	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 193		µg/kg dry	193	50.7	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 193		µg/kg dry	193	44.5	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 193		µg/kg dry	193	33.7	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1520		µg/kg dry	1520	50.6	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 193		µg/kg dry	193	25.1	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 193		µg/kg dry	193	33.7	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 381		µg/kg dry	381	38.7	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 381		µg/kg dry	381	45.3	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 76.9		µg/kg dry	76.9	43.6	1	"	"	"	"	"	X
108-95-2	Phenol	< 381		µg/kg dry	381	38.5	1	"	"	"	"	"	X
129-00-0	Pyrene	< 76.9		µg/kg dry	76.9	42.4	1	"	"	"	"	"	X
110-86-1	Pyridine	< 381		µg/kg dry	381	90.1	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 381		µg/kg dry	381	46.8	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 76.9		µg/kg dry	76.9	42.4	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 381		µg/kg dry	381	39.3	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 193		µg/kg dry	193	47.0	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 381		µg/kg dry	381	40.5	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 381		µg/kg dry	381	45.3	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*49*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
4165-60-0	*Nitrobenzene-d5*	*64*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*67*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*69*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*69*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	< 15.1		mg/kg dry	15.1	12.7	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*71*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*86*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.89		mg/kg dry	3.89	0.210	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**5.98**		mg/kg dry	1.95	0.247	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**20.4**		mg/kg dry	1.30	0.153	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.649		mg/kg dry	0.649	0.0336	1	"	"	"	"	"	X
7440-47-3	Chromium	**7.03**		mg/kg dry	1.30	0.173	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.0316		mg/kg dry	0.0316	0.0088	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**3.36**		mg/kg dry	1.95	0.275	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.95		mg/kg dry	1.95	0.371	1	"	"	"	"	"	X
7704-34-9	Sulfur	**83.8**		mg/kg dry	32.4	2.22	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**85.0**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:46	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC59391-08	60139732*2900	Trip Blank	18-Sep-20 00:00	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level) Initial weight: 15 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
78-93-3	2-Butanone (MEK)	< 100	D	µg/kg wet	100	22.8	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (low level) Initial weight: 5 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00		µg/kg wet	5.00	3.26	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 50.0		µg/kg wet	50.0	11.2	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 5.00		µg/kg wet	5.00	3.00	1	"	"	"	"	"	X
71-43-2	Benzene	< 5.00		µg/kg wet	5.00	3.34	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 5.00		µg/kg wet	5.00	3.33	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 5.00		µg/kg wet	5.00	2.84	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 5.00		µg/kg wet	5.00	3.67	1	"	"	"	"	"	X
75-25-2	Bromoform	< 5.00		µg/kg wet	5.00	3.82	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 10.0		µg/kg wet	10.0	1.63	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 10.0		µg/kg wet	10.0	5.36	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 5.00		µg/kg wet	5.00	4.03	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 5.00		µg/kg wet	5.00	3.94	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 10.0		µg/kg wet	10.0	3.51	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.00		µg/kg wet	5.00	3.15	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.00		µg/kg wet	5.00	3.66	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 10.0		µg/kg wet	10.0	3.67	1	"	"	"	"	"	X
67-66-3	Chloroform	< 5.00		µg/kg wet	5.00	3.36	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 10.0		µg/kg wet	10.0	3.84	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 5.00		µg/kg wet	5.00	3.98	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 5.00		µg/kg wet	5.00	4.34	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0	4.24	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 5.00		µg/kg wet	5.00	3.31	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 5.00		µg/kg wet	5.00	3.59	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 5.00		µg/kg wet	5.00	2.94	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.00		µg/kg wet	5.00	4.64	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.00		µg/kg wet	5.00	4.01	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.00		µg/kg wet	5.00	4.74	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0	2.68	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.00		µg/kg wet	5.00	3.39	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.00		µg/kg wet	5.00	3.37	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.00		µg/kg wet	5.00	3.06	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00	2.89	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00	3.11	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.00		µg/kg wet	5.00	3.31	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 5.00		µg/kg wet	5.00	3.82	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC59391-08	60139732*2900	Trip Blank	18-Sep-20 00:00	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Initial weight: 5 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 5.00		µg/kg wet	5.00	3.45	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 5.00		µg/kg wet	5.00	3.40	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00	3.26	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00	3.80	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.00		µg/kg wet	5.00	3.57	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 10.0		µg/kg wet	10.0	5.03	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 10.0		µg/kg wet	10.0	2.94	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.00		µg/kg wet	5.00	3.78	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 5.00		µg/kg wet	5.00	4.91	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 5.00		µg/kg wet	5.00	2.77	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/kg wet	10.0	3.23	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 10.0		µg/kg wet	10.0	2.68	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.00		µg/kg wet	5.00	4.52	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 5.00		µg/kg wet	5.00	4.23	1	"	"	"	"	"	X
100-42-5	Styrene	< 5.00		µg/kg wet	5.00	3.87	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00	3.75	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00	4.58	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 5.00		µg/kg wet	5.00	2.78	1	"	"	"	"	"	X
108-88-3	Toluene	< 5.00		µg/kg wet	5.00	3.17	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 5.00		µg/kg wet	5.00	4.22	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.00		µg/kg wet	5.00	4.61	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 5.00		µg/kg wet	5.00	4.75	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 5.00		µg/kg wet	5.00	3.41	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.00		µg/kg wet	5.00	3.77	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 5.00		µg/kg wet	5.00	3.36	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 5.00		µg/kg wet	5.00	3.82	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 5.00		µg/kg wet	5.00	4.40	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 5.00		µg/kg wet	5.00	4.23	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 5.00		µg/kg wet	5.00	4.25	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 5.00		µg/kg wet	5.00	3.05	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 10.0		µg/kg wet	10.0	6.83	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 5.00		µg/kg wet	5.00	3.65	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 10.0		µg/kg wet	10.0	2.53	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5.00		µg/kg wet	5.00	2.63	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 5.00		µg/kg wet	5.00	3.95	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 5.00		µg/kg wet	5.00	3.29	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 5.00		µg/kg wet	5.00	3.57	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 100		µg/kg wet	100	26.8	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 100		µg/kg wet	100	31.1	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0	3.69	1	"	"	"	"	"	X
64-17-5	Ethanol	< 1000		µg/kg wet	1000	62.0	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC59391-08	60139732*2900	Trip Blank	18-Sep-20 00:00	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
							Initial weight: 5 g						
460-00-4	4-Bromofluorobenzene	92			70-130 %			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	Toluene-d8	101			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	107			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	103			70-130 %			"	"	"	"	"	

SW846 8260C

Batch 2001812 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2001812-BLK1)					Prepared & Analyzed: 23-Sep-20					
2-Butanone (MEK)	< 100	D	µg/kg wet	100						
Surrogate: 4-Bromofluorobenzene	*47.9*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*55.0*		µg/l		*50.0*		*110*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*55.7*		µg/l		*50.0*		*111*	*70-130*		
Surrogate: Dibromofluoromethane	*52.0*		µg/l		*50.0*		*104*	*70-130*		
LCS (2001812-BS1)					Prepared & Analyzed: 23-Sep-20					
2-Butanone (MEK)	**24.5**	D	µg/l		20.0		122	70-130		
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*55.2*		µg/l		*50.0*		*110*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.1*		µg/l		*50.0*		*108*	*70-130*		
Surrogate: Dibromofluoromethane	*50.8*		µg/l		*50.0*		*102*	*70-130*		
LCS Dup (2001812-BSD1)					Prepared & Analyzed: 23-Sep-20					
2-Butanone (MEK)	**25.9**	D	µg/l		20.0		129	70-130	6	30
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*56.4*		µg/l		*50.0*		*113*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*56.4*		µg/l		*50.0*		*113*	*70-130*		
Surrogate: Dibromofluoromethane	*51.8*		µg/l		*50.0*		*104*	*70-130*		

SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2001826-BLK1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00		µg/kg wet	5.00						
Acetone	< 50.0		µg/kg wet	50.0						
Acrylonitrile	< 5.00		µg/kg wet	5.00						
Benzene	< 5.00		µg/kg wet	5.00						
Bromobenzene	< 5.00		µg/kg wet	5.00						
Bromochloromethane	< 5.00		µg/kg wet	5.00						
Bromodichloromethane	< 5.00		µg/kg wet	5.00						
Bromoform	< 5.00		µg/kg wet	5.00						
Bromomethane	< 10.0		µg/kg wet	10.0						
n-Butylbenzene	< 10.0		µg/kg wet	10.0						
sec-Butylbenzene	< 5.00		µg/kg wet	5.00						
tert-Butylbenzene	< 5.00		µg/kg wet	5.00						
Carbon disulfide	< 10.0		µg/kg wet	10.0						
Carbon tetrachloride	< 5.00		µg/kg wet	5.00						
Chlorobenzene	< 5.00		µg/kg wet	5.00						
Chloroethane	< 10.0		µg/kg wet	10.0						
Chloroform	< 5.00		µg/kg wet	5.00						
Chloromethane	< 10.0		µg/kg wet	10.0						
2-Chlorotoluene	< 5.00		µg/kg wet	5.00						
4-Chlorotoluene	< 5.00		µg/kg wet	5.00						
1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0						
Dibromochloromethane	< 5.00		µg/kg wet	5.00						
1,2-Dibromoethane (EDB)	< 5.00		µg/kg wet	5.00						
Dibromomethane	< 5.00		µg/kg wet	5.00						
1,2-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,4-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0						
1,1-Dichloroethane	< 5.00		µg/kg wet	5.00						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
Blank (2001826-BLK1)					Prepared & Analyzed: 28-Sep-20					
1,2-Dichloroethane	< 5.00		µg/kg wet	5.00						
1,1-Dichloroethene	< 5.00		µg/kg wet	5.00						
cis-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
trans-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
1,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,3-Dichloropropane	< 5.00		µg/kg wet	5.00						
2,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,1-Dichloropropene	< 5.00		µg/kg wet	5.00						
cis-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
trans-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
Ethylbenzene	< 5.00		µg/kg wet	5.00						
Hexachlorobutadiene	< 10.0		µg/kg wet	10.0						
2-Hexanone (MBK)	< 10.0		µg/kg wet	10.0						
Isopropylbenzene	< 5.00		µg/kg wet	5.00						
4-Isopropyltoluene	< 5.00		µg/kg wet	5.00						
Methyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/kg wet	10.0						
Methylene chloride	< 10.0		µg/kg wet	10.0						
Naphthalene	< 5.00		µg/kg wet	5.00						
n-Propylbenzene	< 5.00		µg/kg wet	5.00						
Styrene	< 5.00		µg/kg wet	5.00						
1,1,1,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						
1,1,2,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						
Tetrachloroethene	< 5.00		µg/kg wet	5.00						
Toluene	< 5.00		µg/kg wet	5.00						
1,2,3-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,1,1-Trichloroethane	< 5.00		µg/kg wet	5.00						
1,1,2-Trichloroethane	< 5.00		µg/kg wet	5.00						
Trichloroethene	< 5.00		µg/kg wet	5.00						
Trichlorofluoromethane (Freon 11)	< 5.00		µg/kg wet	5.00						
1,2,3-Trichloropropane	< 5.00		µg/kg wet	5.00						
1,2,4-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
Vinyl chloride	< 5.00		µg/kg wet	5.00						
m,p-Xylene	< 10.0		µg/kg wet	10.0						
o-Xylene	< 5.00		µg/kg wet	5.00						
Tetrahydrofuran	< 10.0		µg/kg wet	10.0						
Ethyl ether	< 5.00		µg/kg wet	5.00						
Tert-amyl methyl ether	< 5.00		µg/kg wet	5.00						
Ethyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
Di-isopropyl ether	< 5.00		µg/kg wet	5.00						
Tert-Butanol / butyl alcohol	< 100		µg/kg wet	100						
1,4-Dioxane	< 100		µg/kg wet	100						
trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0						
Ethanol	< 1000		µg/kg wet	1000						
Surrogate: 4-Bromofluorobenzene	*48.8*		µg/kg wet		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.5*		µg/kg wet		*50.0*		*105*	*70-130*		

Volatile Organic Compounds - Quality Control

SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2001826-BLK1)					Prepared & Analyzed: 28-Sep-20					
Surrogate: Dibromofluoromethane	*51.9*		µg/kg wet		*50.0*		*104*	*70-130*		
LCS (2001826-BS1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**20.1**		µg/kg		20.0		100	70-130		
Acetone	**10.4**	QC6	µg/kg		20.0		52	70-130		
Acrylonitrile	**18.1**		µg/kg		20.0		90	70-130		
Benzene	**19.7**		µg/kg		20.0		98	70-130		
Bromobenzene	**20.3**		µg/kg		20.0		101	70-130		
Bromochloromethane	**20.6**		µg/kg		20.0		103	70-130		
Bromodichloromethane	**20.0**		µg/kg		20.0		100	70-130		
Bromoform	**20.8**		µg/kg		20.0		104	70-130		
Bromomethane	**21.6**		µg/kg		20.0		108	70-130		
n-Butylbenzene	**20.0**		µg/kg		20.0		100	70-130		
sec-Butylbenzene	**20.5**		µg/kg		20.0		102	70-130		
tert-Butylbenzene	**20.4**		µg/kg		20.0		102	70-130		
Carbon disulfide	**20.1**		µg/kg		20.0		101	70-130		
Carbon tetrachloride	**20.6**		µg/kg		20.0		103	70-130		
Chlorobenzene	**20.5**		µg/kg		20.0		103	70-130		
Chloroethane	**103**	BsH, QC6	µg/kg		20.0		513	70-130		
Chloroform	**19.5**		µg/kg		20.0		98	70-130		
Chloromethane	**21.9**		µg/kg		20.0		109	70-130		
2-Chlorotoluene	**18.5**		µg/kg		20.0		93	70-130		
4-Chlorotoluene	**19.3**		µg/kg		20.0		96	70-130		
1,2-Dibromo-3-chloropropane	**19.3**		µg/kg		20.0		96	70-130		
Dibromochloromethane	**20.0**		µg/kg		20.0		100	70-130		
1,2-Dibromoethane (EDB)	**20.1**		µg/kg		20.0		100	70-130		
Dibromomethane	**19.1**		µg/kg		20.0		96	70-130		
1,2-Dichlorobenzene	**20.1**		µg/kg		20.0		100	70-130		
1,3-Dichlorobenzene	**20.3**		µg/kg		20.0		101	70-130		
1,4-Dichlorobenzene	**19.5**		µg/kg		20.0		97	70-130		
Dichlorodifluoromethane (Freon12)	**21.6**		µg/kg		20.0		108	70-130		
1,1-Dichloroethane	**19.8**		µg/kg		20.0		99	70-130		
1,2-Dichloroethane	**20.0**		µg/kg		20.0		100	70-130		
1,1-Dichloroethene	**19.7**		µg/kg		20.0		99	70-130		
cis-1,2-Dichloroethene	**19.6**		µg/kg		20.0		98	70-130		
trans-1,2-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130		
1,2-Dichloropropane	**19.3**		µg/kg		20.0		97	70-130		
1,3-Dichloropropane	**19.7**		µg/kg		20.0		98	70-130		
2,2-Dichloropropane	**20.0**		µg/kg		20.0		100	70-130		
1,1-Dichloropropene	**20.0**		µg/kg		20.0		100	70-130		
cis-1,3-Dichloropropene	**19.2**		µg/kg		20.0		96	70-130		
trans-1,3-Dichloropropene	**17.9**		µg/kg		20.0		89	70-130		
Ethylbenzene	**20.2**		µg/kg		20.0		101	70-130		
Hexachlorobutadiene	**20.7**		µg/kg		20.0		104	70-130		
2-Hexanone (MBK)	**19.2**		µg/kg		20.0		96	70-130		
Isopropylbenzene	**20.4**		µg/kg		20.0		102	70-130		
4-Isopropyltoluene	**19.5**		µg/kg		20.0		98	70-130		
Methyl tert-butyl ether	**19.4**		µg/kg		20.0		97	70-130		
4-Methyl-2-pentanone (MIBK)	**20.0**		µg/kg		20.0		100	70-130		
Methylene chloride	**19.6**		µg/kg		20.0		98	70-130		

SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (2001826-BS1)					Prepared & Analyzed: 28-Sep-20					
Naphthalene	**19.5**		µg/kg		20.0		97	70-130		
n-Propylbenzene	**20.1**		µg/kg		20.0		101	70-130		
Styrene	**19.8**		µg/kg		20.0		99	70-130		
1,1,1,2-Tetrachloroethane	**20.2**		µg/kg		20.0		101	70-130		
1,1,2,2-Tetrachloroethane	**20.3**		µg/kg		20.0		102	70-130		
Tetrachloroethene	**20.4**		µg/kg		20.0		102	70-130		
Toluene	**19.7**		µg/kg		20.0		99	70-130		
1,2,3-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130		
1,2,4-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130		
1,3,5-Trichlorobenzene	**19.8**		µg/kg		20.0		99	70-130		
1,1,1-Trichloroethane	**20.3**		µg/kg		20.0		102	70-130		
1,1,2-Trichloroethane	**19.9**		µg/kg		20.0		99	70-130		
Trichloroethene	**20.1**		µg/kg		20.0		100	70-130		
Trichlorofluoromethane (Freon 11)	**19.0**		µg/kg		20.0		95	70-130		
1,2,3-Trichloropropane	**19.9**		µg/kg		20.0		100	70-130		
1,2,4-Trimethylbenzene	**20.1**		µg/kg		20.0		100	70-130		
1,3,5-Trimethylbenzene	**19.7**		µg/kg		20.0		98	70-130		
Vinyl chloride	**21.8**		µg/kg		20.0		109	70-130		
m,p-Xylene	**38.8**		µg/kg		40.0		97	70-130		
o-Xylene	**20.2**		µg/kg		20.0		101	70-130		
Tetrahydrofuran	**17.7**		µg/kg		20.0		89	70-130		
Ethyl ether	**18.6**		µg/kg		20.0		93	70-130		
Tert-amyl methyl ether	**20.4**		µg/kg		20.0		102	70-130		
Ethyl tert-butyl ether	**18.9**		µg/kg		20.0		95	70-130		
Di-isopropyl ether	**19.3**		µg/kg		20.0		96	70-130		
Tert-Butanol / butyl alcohol	**182**		µg/kg		200		91	70-130		
1,4-Dioxane	**198**		µg/kg		200		99	70-130		
trans-1,4-Dichloro-2-butene	**20.0**		µg/kg		20.0		100	70-130		
Ethanol	**208**	QC6	µg/kg		400		52	70-130		
Surrogate: 4-Bromofluorobenzene	*51.1*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*50.6*		µg/kg wet		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.1*		µg/kg wet		*50.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*50.8*		µg/kg wet		*50.0*		*102*	*70-130*		
LCS Dup (2001826-BSD1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**20.0**		µg/kg		20.0		100	70-130	0.4	30
Acetone	**10.3**	QC6	µg/kg		20.0		52	70-130	0.4	30
Acrylonitrile	**20.1**		µg/kg		20.0		101	70-130	11	30
Benzene	**20.2**		µg/kg		20.0		101	70-130	2	30
Bromobenzene	**19.1**		µg/kg		20.0		95	70-130	6	30
Bromochloromethane	**20.8**		µg/kg		20.0		104	70-130	1	30
Bromodichloromethane	**20.9**		µg/kg		20.0		104	70-130	4	30
Bromoform	**19.4**		µg/kg		20.0		97	70-130	7	30
Bromomethane	**22.2**		µg/kg		20.0		111	70-130	2	30
n-Butylbenzene	**20.8**		µg/kg		20.0		104	70-130	4	30
sec-Butylbenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
tert-Butylbenzene	**19.4**		µg/kg		20.0		97	70-130	5	30
Carbon disulfide	**20.3**		µg/kg		20.0		102	70-130	1	30
Carbon tetrachloride	**19.9**		µg/kg		20.0		100	70-130	3	30
Chlorobenzene	**19.2**		µg/kg		20.0		96	70-130	7	30

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
LCS Dup (2001826-BSD1)					Prepared & Analyzed: 28-Sep-20					
Chloroethane	**103**	BsH, QC6	µg/kg		20.0		515	70-130	0.5	30
Chloroform	**19.9**		µg/kg		20.0		100	70-130	2	30
Chloromethane	**22.9**		µg/kg		20.0		115	70-130	5	30
2-Chlorotoluene	**19.4**		µg/kg		20.0		97	70-130	5	30
4-Chlorotoluene	**19.5**		µg/kg		20.0		98	70-130	1	30
1,2-Dibromo-3-chloropropane	**20.4**		µg/kg		20.0		102	70-130	5	30
Dibromochloromethane	**20.0**		µg/kg		20.0		100	70-130	0.2	30
1,2-Dibromoethane (EDB)	**20.4**		µg/kg		20.0		102	70-130	1	30
Dibromomethane	**19.6**		µg/kg		20.0		98	70-130	2	30
1,2-Dichlorobenzene	**20.1**		µg/kg		20.0		101	70-130	0.2	30
1,3-Dichlorobenzene	**19.1**		µg/kg		20.0		96	70-130	6	30
1,4-Dichlorobenzene	**19.8**		µg/kg		20.0		99	70-130	2	30
Dichlorodifluoromethane (Freon12)	**22.1**		µg/kg		20.0		110	70-130	2	30
1,1-Dichloroethane	**21.1**		µg/kg		20.0		105	70-130	6	30
1,2-Dichloroethane	**21.0**		µg/kg		20.0		105	70-130	5	30
1,1-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130	0.6	30
cis-1,2-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130	0.9	30
trans-1,2-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130	0.3	30
1,2-Dichloropropane	**20.9**		µg/kg		20.0		105	70-130	8	30
1,3-Dichloropropane	**20.6**		µg/kg		20.0		103	70-130	4	30
2,2-Dichloropropane	**20.0**		µg/kg		20.0		100	70-130	0.1	30
1,1-Dichloropropene	**20.6**		µg/kg		20.0		103	70-130	3	30
cis-1,3-Dichloropropene	**20.2**		µg/kg		20.0		101	70-130	5	30
trans-1,3-Dichloropropene	**18.5**		µg/kg		20.0		92	70-130	3	30
Ethylbenzene	**19.7**		µg/kg		20.0		99	70-130	2	30
Hexachlorobutadiene	**20.3**		µg/kg		20.0		102	70-130	2	30
2-Hexanone (MBK)	**21.2**		µg/kg		20.0		106	70-130	10	30
Isopropylbenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
4-Isopropyltoluene	**20.2**		µg/kg		20.0		101	70-130	3	30
Methyl tert-butyl ether	**19.9**		µg/kg		20.0		99	70-130	2	30
4-Methyl-2-pentanone (MIBK)	**21.3**		µg/kg		20.0		107	70-130	7	30
Methylene chloride	**18.5**		µg/kg		20.0		92	70-130	6	30
Naphthalene	**20.4**		µg/kg		20.0		102	70-130	4	30
n-Propylbenzene	**19.5**		µg/kg		20.0		98	70-130	3	30
Styrene	**19.2**		µg/kg		20.0		96	70-130	3	30
1,1,1,2-Tetrachloroethane	**19.1**		µg/kg		20.0		95	70-130	6	30
1,1,2,2-Tetrachloroethane	**20.1**		µg/kg		20.0		101	70-130	0.8	30
Tetrachloroethene	**19.5**		µg/kg		20.0		98	70-130	4	30
Toluene	**19.6**		µg/kg		20.0		98	70-130	0.6	30
1,2,3-Trichlorobenzene	**19.9**		µg/kg		20.0		100	70-130	3	30
1,2,4-Trichlorobenzene	**19.5**		µg/kg		20.0		98	70-130	0.9	30
1,3,5-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130	2	30
1,1,1-Trichloroethane	**20.4**		µg/kg		20.0		102	70-130	0.2	30
1,1,2-Trichloroethane	**20.5**		µg/kg		20.0		102	70-130	3	30
Trichloroethene	**20.0**		µg/kg		20.0		100	70-130	0.2	30
Trichlorofluoromethane (Freon 11)	**18.0**		µg/kg		20.0		90	70-130	5	30
1,2,3-Trichloropropane	**19.5**		µg/kg		20.0		97	70-130	2	30
1,2,4-Trimethylbenzene	**19.0**		µg/kg		20.0		95	70-130	6	30
1,3,5-Trimethylbenzene	**18.8**		µg/kg		20.0		94	70-130	5	30
Vinyl chloride	**23.1**		µg/kg		20.0		115	70-130	6	30

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
LCS Dup (2001826-BSD1)					Prepared & Analyzed: 28-Sep-20					
m,p-Xylene	**36.8**		µg/kg		40.0		92	70-130	5	30
o-Xylene	**19.1**		µg/kg		20.0		95	70-130	6	30
Tetrahydrofuran	**19.8**		µg/kg		20.0		99	70-130	11	30
Ethyl ether	**19.6**		µg/kg		20.0		98	70-130	5	30
Tert-amyl methyl ether	**21.9**		µg/kg		20.0		109	70-130	7	30
Ethyl tert-butyl ether	**20.6**		µg/kg		20.0		103	70-130	8	30
Di-isopropyl ether	**20.9**		µg/kg		20.0		105	70-130	8	30
Tert-Butanol / butyl alcohol	**180**		µg/kg		200		90	70-130	1	30
1,4-Dioxane	**184**		µg/kg		200		92	70-130	7	30
trans-1,4-Dichloro-2-butene	**20.2**		µg/kg		20.0		101	70-130	1	30
Ethanol	**294**	QC6	µg/kg		400		73	70-130	34	30
Surrogate: 4-Bromofluorobenzene	*50.2*		µg/kg wet		*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.4*		µg/kg wet		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*50.0*		µg/kg wet		*50.0*		*100*	*70-130*		
MRL Check (2001826-MRL1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**4.74**		µg/kg		5.00		95	0-200		
Acetone	**14.4**	QC6	µg/kg		5.00		288	0-200		
Acrylonitrile	**5.71**		µg/kg		5.00		114	0-200		
Benzene	**4.39**		µg/kg		5.00		88	0-200		
Bromobenzene	**4.01**		µg/kg		5.00		80	0-200		
Bromochloromethane	**4.49**		µg/kg		5.00		90	0-200		
Bromodichloromethane	**4.64**		µg/kg		5.00		93	0-200		
Bromoform	**4.10**		µg/kg		5.00		82	0-200		
Bromomethane	**4.53**		µg/kg		5.00		91	0-200		
n-Butylbenzene	**4.63**		µg/kg		5.00		93	0-200		
sec-Butylbenzene	**4.01**		µg/kg		5.00		80	0-200		
tert-Butylbenzene	**3.71**		µg/kg		5.00		74	0-200		
Carbon disulfide	**4.60**		µg/kg		5.00		92	0-200		
Carbon tetrachloride	**4.08**		µg/kg		5.00		82	0-200		
Chlorobenzene	**4.27**		µg/kg		5.00		85	0-200		
Chloroethane	**6.73**		µg/kg		5.00		135	0-200		
Chloroform	**4.85**		µg/kg		5.00		97	0-200		
Chloromethane	**4.88**		µg/kg		5.00		98	0-200		
2-Chlorotoluene	**4.29**		µg/kg		5.00		86	0-200		
4-Chlorotoluene	**4.13**		µg/kg		5.00		83	0-200		
1,2-Dibromo-3-chloropropane	**4.28**		µg/kg		5.00		86	0-200		
Dibromochloromethane	**3.96**		µg/kg		5.00		79	0-200		
1,2-Dibromoethane (EDB)	**4.44**		µg/kg		5.00		89	0-200		
Dibromomethane	**4.82**		µg/kg		5.00		96	0-200		
1,2-Dichlorobenzene	**4.48**		µg/kg		5.00		90	0-200		
1,3-Dichlorobenzene	**4.17**		µg/kg		5.00		83	0-200		
1,4-Dichlorobenzene	**4.53**		µg/kg		5.00		91	0-200		
Dichlorodifluoromethane (Freon12)	**3.81**		µg/kg		5.00		76	0-200		
1,1-Dichloroethane	**4.98**		µg/kg		5.00		100	0-200		
1,2-Dichloroethane	**4.77**		µg/kg		5.00		95	0-200		
1,1-Dichloroethene	**4.53**		µg/kg		5.00		91	0-200		
cis-1,2-Dichloroethene	**4.56**		µg/kg		5.00		91	0-200		
trans-1,2-Dichloroethene	**4.73**		µg/kg		5.00		95	0-200		
1,2-Dichloropropane	**4.91**		µg/kg		5.00		98	0-200		

SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

MRL Check (2001826-MRL1) Prepared & Analyzed: 28-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,3-Dichloropropane	**4.47**		µg/kg		5.00		89	0-200		
2,2-Dichloropropane	**4.11**		µg/kg		5.00		82	0-200		
1,1-Dichloropropene	**4.46**		µg/kg		5.00		89	0-200		
cis-1,3-Dichloropropene	**4.06**		µg/kg		5.00		81	0-200		
trans-1,3-Dichloropropene	**4.23**		µg/kg		5.00		85	0-200		
Ethylbenzene	**7.78**		µg/kg		5.00		156	0-200		
Hexachlorobutadiene	**4.38**		µg/kg		5.00		88	0-200		
2-Hexanone (MBK)	**4.92**		µg/kg		5.00		98	0-200		
Isopropylbenzene	**4.10**		µg/kg		5.00		82	0-200		
4-Isopropyltoluene	**4.15**		µg/kg		5.00		83	0-200		
Methyl tert-butyl ether	**4.51**		µg/kg		5.00		90	0-200		
4-Methyl-2-pentanone (MIBK)	**5.13**		µg/kg		5.00		103	0-200		
Methylene chloride	**7.36**		µg/kg		5.00		147	0-200		
Naphthalene	**4.59**		µg/kg		5.00		92	0-200		
n-Propylbenzene	**5.39**		µg/kg		5.00		108	0-200		
Styrene	**3.68**		µg/kg		5.00		74	0-200		
1,1,1,2-Tetrachloroethane	**4.28**		µg/kg		5.00		86	0-200		
1,1,2,2-Tetrachloroethane	**4.78**		µg/kg		5.00		96	0-200		
Tetrachloroethene	**4.63**		µg/kg		5.00		93	0-200		
Toluene	**5.51**		µg/kg		5.00		110	0-200		
1,2,3-Trichlorobenzene	**4.29**		µg/kg		5.00		86	0-200		
1,2,4-Trichlorobenzene	**4.33**		µg/kg		5.00		87	0-200		
1,3,5-Trichlorobenzene	**4.33**		µg/kg		5.00		87	0-200		
1,1,1-Trichloroethane	**4.25**		µg/kg		5.00		85	0-200		
1,1,2-Trichloroethane	**4.89**		µg/kg		5.00		98	0-200		
Trichloroethene	**4.40**		µg/kg		5.00		88	0-200		
Trichlorofluoromethane (Freon 11)	**6.74**		µg/kg		5.00		135	0-200		
1,2,3-Trichloropropane	**4.42**		µg/kg		5.00		88	0-200		
1,2,4-Trimethylbenzene	**9.77**		µg/kg		5.00		195	0-200		
1,3,5-Trimethylbenzene	**5.29**		µg/kg		5.00		106	0-200		
Vinyl chloride	**4.33**		µg/kg		5.00		87	0-200		
m,p-Xylene	**18.9**		µg/kg		10.0		189	0-200		
o-Xylene	**6.33**		µg/kg		5.00		127	0-200		
Tetrahydrofuran	**4.04**		µg/kg		5.00		81	0-200		
Ethyl ether	**4.83**		µg/kg		5.00		97	0-200		
Tert-amyl methyl ether	**5.68**		µg/kg		5.00		114	0-200		
Ethyl tert-butyl ether	**4.26**		µg/kg		5.00		85	0-200		
Di-isopropyl ether	**4.48**		µg/kg		5.00		90	0-200		
Tert-Butanol / butyl alcohol	**52.3**		µg/kg		50.0		105	0-200		
1,4-Dioxane	**41.2**		µg/kg		50.0		82	0-200		
trans-1,4-Dichloro-2-butene	**3.70**		µg/kg		5.00		74	0-200		
Ethanol	**190**		µg/kg		100		190	0-200		
Surrogate: 4-Bromofluorobenzene	*48.4*		µg/kg wet		*50.0*		*97*	*70-130*		
Surrogate: Toluene-d8	*52.2*		µg/kg wet		*50.0*		*104*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.9*		µg/kg wet		*50.0*		*110*	*70-130*		
Surrogate: Dibromofluoromethane	*50.7*		µg/kg wet		*50.0*		*101*	*70-130*		

Batch 2001880 - SW846 5035A Soil (low level)

Blank (2001880-BLK1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00		µg/kg wet	5.00						
Acetone	< 50.0		µg/kg wet	50.0						

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

Blank (2001880-BLK1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acrylonitrile	< 5.00		µg/kg wet	5.00						
Benzene	< 5.00		µg/kg wet	5.00						
Bromobenzene	< 5.00		µg/kg wet	5.00						
Bromochloromethane	< 5.00		µg/kg wet	5.00						
Bromodichloromethane	< 5.00		µg/kg wet	5.00						
Bromoform	< 5.00		µg/kg wet	5.00						
Bromomethane	< 10.0		µg/kg wet	10.0						
n-Butylbenzene	< 10.0		µg/kg wet	10.0						
sec-Butylbenzene	< 5.00		µg/kg wet	5.00						
tert-Butylbenzene	< 5.00		µg/kg wet	5.00						
Carbon disulfide	< 10.0		µg/kg wet	10.0						
Carbon tetrachloride	< 5.00		µg/kg wet	5.00						
Chlorobenzene	< 5.00		µg/kg wet	5.00						
Chloroethane	< 10.0		µg/kg wet	10.0						
Chloroform	< 5.00		µg/kg wet	5.00						
Chloromethane	< 10.0		µg/kg wet	10.0						
2-Chlorotoluene	< 5.00		µg/kg wet	5.00						
4-Chlorotoluene	< 5.00		µg/kg wet	5.00						
1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0						
Dibromochloromethane	< 5.00		µg/kg wet	5.00						
1,2-Dibromoethane (EDB)	< 5.00		µg/kg wet	5.00						
Dibromomethane	< 5.00		µg/kg wet	5.00						
1,2-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,4-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0						
1,1-Dichloroethane	< 5.00		µg/kg wet	5.00						
1,2-Dichloroethane	< 5.00		µg/kg wet	5.00						
1,1-Dichloroethene	< 5.00		µg/kg wet	5.00						
cis-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
trans-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
1,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,3-Dichloropropane	< 5.00		µg/kg wet	5.00						
2,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,1-Dichloropropene	< 5.00		µg/kg wet	5.00						
cis-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
trans-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
Ethylbenzene	< 5.00		µg/kg wet	5.00						
Hexachlorobutadiene	< 10.0		µg/kg wet	10.0						
2-Hexanone (MBK)	< 10.0		µg/kg wet	10.0						
Isopropylbenzene	< 5.00		µg/kg wet	5.00						
4-Isopropyltoluene	< 5.00		µg/kg wet	5.00						
Methyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/kg wet	10.0						
Methylene chloride	< 10.0		µg/kg wet	10.0						
Naphthalene	< 5.00		µg/kg wet	5.00						
n-Propylbenzene	< 5.00		µg/kg wet	5.00						
Styrene	< 5.00		µg/kg wet	5.00						
1,1,1,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						
1,1,2,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001880 - SW846 5035A Soil (low level)										
Blank (2001880-BLK1)					Prepared & Analyzed: 29-Sep-20					
Tetrachloroethene	< 5.00		µg/kg wet	5.00						
Toluene	< 5.00		µg/kg wet	5.00						
1,2,3-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,1,1-Trichloroethane	< 5.00		µg/kg wet	5.00						
1,1,2-Trichloroethane	< 5.00		µg/kg wet	5.00						
Trichloroethene	< 5.00		µg/kg wet	5.00						
Trichlorofluoromethane (Freon 11)	< 5.00		µg/kg wet	5.00						
1,2,3-Trichloropropane	< 5.00		µg/kg wet	5.00						
1,2,4-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
Vinyl chloride	< 5.00		µg/kg wet	5.00						
m,p-Xylene	< 10.0		µg/kg wet	10.0						
o-Xylene	< 5.00		µg/kg wet	5.00						
Tetrahydrofuran	< 10.0		µg/kg wet	10.0						
Ethyl ether	< 5.00		µg/kg wet	5.00						
Tert-amyl methyl ether	< 5.00		µg/kg wet	5.00						
Ethyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
Di-isopropyl ether	< 5.00		µg/kg wet	5.00						
Tert-Butanol / butyl alcohol	< 100		µg/kg wet	100						
1,4-Dioxane	< 100		µg/kg wet	100						
trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0						
Ethanol	< 1000		µg/kg wet	1000						
Surrogate: 4-Bromofluorobenzene	*47.3*		µg/kg wet		*50.0*		*95*	*70-130*		
Surrogate: Toluene-d8	*51.4*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.2*		µg/kg wet		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*51.0*		µg/kg wet		*50.0*		*102*	*70-130*		
LCS (2001880-BS1)					Prepared & Analyzed: 29-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**18.5**		µg/kg		20.0		92	70-130		
Acetone	**7.81**	QC6	µg/kg		20.0		39	70-130		
Acrylonitrile	**17.5**		µg/kg		20.0		87	70-130		
Benzene	**19.5**		µg/kg		20.0		97	70-130		
Bromobenzene	**20.4**		µg/kg		20.0		102	70-130		
Bromochloromethane	**19.3**		µg/kg		20.0		96	70-130		
Bromodichloromethane	**19.7**		µg/kg		20.0		98	70-130		
Bromoform	**19.7**		µg/kg		20.0		98	70-130		
Bromomethane	**22.2**		µg/kg		20.0		111	70-130		
n-Butylbenzene	**19.7**		µg/kg		20.0		98	70-130		
sec-Butylbenzene	**19.6**		µg/kg		20.0		98	70-130		
tert-Butylbenzene	**19.8**		µg/kg		20.0		99	70-130		
Carbon disulfide	**19.6**		µg/kg		20.0		98	70-130		
Carbon tetrachloride	**18.8**		µg/kg		20.0		94	70-130		
Chlorobenzene	**20.2**		µg/kg		20.0		101	70-130		
Chloroethane	**105**	BsH, QC6	µg/kg		20.0		525	70-130		
Chloroform	**19.8**		µg/kg		20.0		99	70-130		
Chloromethane	**20.3**		µg/kg		20.0		102	70-130		
2-Chlorotoluene	**18.2**		µg/kg		20.0		91	70-130		
4-Chlorotoluene	**19.2**		µg/kg		20.0		96	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

LCS (2001880-BS1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dibromo-3-chloropropane	**18.5**		µg/kg		20.0		92	70-130		
Dibromochloromethane	**19.2**		µg/kg		20.0		96	70-130		
1,2-Dibromoethane (EDB)	**19.3**		µg/kg		20.0		97	70-130		
Dibromomethane	**18.9**		µg/kg		20.0		94	70-130		
1,2-Dichlorobenzene	**20.5**		µg/kg		20.0		102	70-130		
1,3-Dichlorobenzene	**20.4**		µg/kg		20.0		102	70-130		
1,4-Dichlorobenzene	**20.0**		µg/kg		20.0		100	70-130		
Dichlorodifluoromethane (Freon12)	**18.5**		µg/kg		20.0		92	70-130		
1,1-Dichloroethane	**19.8**		µg/kg		20.0		99	70-130		
1,2-Dichloroethane	**19.8**		µg/kg		20.0		99	70-130		
1,1-Dichloroethene	**18.6**		µg/kg		20.0		93	70-130		
cis-1,2-Dichloroethene	**19.4**		µg/kg		20.0		97	70-130		
trans-1,2-Dichloroethene	**19.5**		µg/kg		20.0		98	70-130		
1,2-Dichloropropane	**19.8**		µg/kg		20.0		99	70-130		
1,3-Dichloropropane	**19.4**		µg/kg		20.0		97	70-130		
2,2-Dichloropropane	**19.3**		µg/kg		20.0		96	70-130		
1,1-Dichloropropene	**18.7**		µg/kg		20.0		93	70-130		
cis-1,3-Dichloropropene	**18.8**		µg/kg		20.0		94	70-130		
trans-1,3-Dichloropropene	**17.9**		µg/kg		20.0		89	70-130		
Ethylbenzene	**19.6**		µg/kg		20.0		98	70-130		
Hexachlorobutadiene	**20.2**		µg/kg		20.0		101	70-130		
2-Hexanone (MBK)	**16.6**		µg/kg		20.0		83	70-130		
Isopropylbenzene	**19.4**		µg/kg		20.0		97	70-130		
4-Isopropyltoluene	**19.2**		µg/kg		20.0		96	70-130		
Methyl tert-butyl ether	**18.1**		µg/kg		20.0		91	70-130		
4-Methyl-2-pentanone (MIBK)	**17.9**		µg/kg		20.0		89	70-130		
Methylene chloride	**17.4**		µg/kg		20.0		87	70-130		
Naphthalene	**18.8**		µg/kg		20.0		94	70-130		
n-Propylbenzene	**20.0**		µg/kg		20.0		100	70-130		
Styrene	**19.4**		µg/kg		20.0		97	70-130		
1,1,1,2-Tetrachloroethane	**20.0**		µg/kg		20.0		100	70-130		
1,1,2,2-Tetrachloroethane	**19.5**		µg/kg		20.0		97	70-130		
Tetrachloroethene	**19.6**		µg/kg		20.0		98	70-130		
Toluene	**19.8**		µg/kg		20.0		99	70-130		
1,2,3-Trichlorobenzene	**20.3**		µg/kg		20.0		102	70-130		
1,2,4-Trichlorobenzene	**19.9**		µg/kg		20.0		100	70-130		
1,3,5-Trichlorobenzene	**20.1**		µg/kg		20.0		101	70-130		
1,1,1-Trichloroethane	**19.7**		µg/kg		20.0		98	70-130		
1,1,2-Trichloroethane	**19.5**		µg/kg		20.0		97	70-130		
Trichloroethene	**19.1**		µg/kg		20.0		95	70-130		
Trichlorofluoromethane (Freon 11)	**17.5**		µg/kg		20.0		88	70-130		
1,2,3-Trichloropropane	**18.0**		µg/kg		20.0		90	70-130		
1,2,4-Trimethylbenzene	**19.7**		µg/kg		20.0		99	70-130		
1,3,5-Trimethylbenzene	**19.4**		µg/kg		20.0		97	70-130		
Vinyl chloride	**21.7**		µg/kg		20.0		108	70-130		
m,p-Xylene	**37.6**		µg/kg		40.0		94	70-130		
o-Xylene	**19.1**		µg/kg		20.0		96	70-130		
Tetrahydrofuran	**15.6**		µg/kg		20.0		78	70-130		
Ethyl ether	**18.0**		µg/kg		20.0		90	70-130		
Tert-amyl methyl ether	**20.1**		µg/kg		20.0		101	70-130		

Volatile Organic Compounds - Quality Control

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (2001880-BS1)					Prepared & Analyzed: 29-Sep-20					
Ethyl tert-butyl ether	**18.4**		µg/kg		20.0		92	70-130		
Di-isopropyl ether	**18.6**		µg/kg		20.0		93	70-130		
Tert-Butanol / butyl alcohol	**160**		µg/kg		200		80	70-130		
1,4-Dioxane	**172**		µg/kg		200		86	70-130		
trans-1,4-Dichloro-2-butene	**18.6**		µg/kg		20.0		93	70-130		
Ethanol	**281**		µg/kg		400		70	70-130		
Surrogate: 4-Bromofluorobenzene	*49.3*		µg/kg wet		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.7*		µg/kg wet		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.2*		µg/kg wet		*50.0*		*98*	*70-130*		
Surrogate: Dibromofluoromethane	*49.3*		µg/kg wet		*50.0*		*99*	*70-130*		
LCS Dup (2001880-BSD1)					Prepared & Analyzed: 29-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**18.9**		µg/kg		20.0		95	70-130	3	30
Acetone	**10.0**	QC6	µg/kg		20.0		50	70-130	25	30
Acrylonitrile	**19.2**		µg/kg		20.0		96	70-130	9	30
Benzene	**20.3**		µg/kg		20.0		101	70-130	4	30
Bromobenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
Bromochloromethane	**19.8**		µg/kg		20.0		99	70-130	3	30
Bromodichloromethane	**20.2**		µg/kg		20.0		101	70-130	3	30
Bromoform	**19.4**		µg/kg		20.0		97	70-130	1	30
Bromomethane	**22.0**		µg/kg		20.0		110	70-130	0.8	30
n-Butylbenzene	**20.4**		µg/kg		20.0		102	70-130	3	30
sec-Butylbenzene	**19.5**		µg/kg		20.0		98	70-130	0.5	30
tert-Butylbenzene	**19.5**		µg/kg		20.0		97	70-130	2	30
Carbon disulfide	**20.1**		µg/kg		20.0		101	70-130	3	30
Carbon tetrachloride	**19.6**		µg/kg		20.0		98	70-130	4	30
Chlorobenzene	**19.9**		µg/kg		20.0		99	70-130	2	30
Chloroethane	**108**	BsH, QC6	µg/kg		20.0		541	70-130	3	30
Chloroform	**19.9**		µg/kg		20.0		100	70-130	0.7	30
Chloromethane	**21.1**		µg/kg		20.0		106	70-130	4	30
2-Chlorotoluene	**18.3**		µg/kg		20.0		92	70-130	0.5	30
4-Chlorotoluene	**19.2**		µg/kg		20.0		96	70-130	0.2	30
1,2-Dibromo-3-chloropropane	**18.7**		µg/kg		20.0		93	70-130	1	30
Dibromochloromethane	**19.5**		µg/kg		20.0		97	70-130	1	30
1,2-Dibromoethane (EDB)	**19.7**		µg/kg		20.0		99	70-130	2	30
Dibromomethane	**18.8**		µg/kg		20.0		94	70-130	0.4	30
1,2-Dichlorobenzene	**20.3**		µg/kg		20.0		101	70-130	1	30
1,3-Dichlorobenzene	**19.8**		µg/kg		20.0		99	70-130	3	30
1,4-Dichlorobenzene	**20.2**		µg/kg		20.0		101	70-130	1	30
Dichlorodifluoromethane (Freon12)	**19.0**		µg/kg		20.0		95	70-130	3	30
1,1-Dichloroethane	**21.3**		µg/kg		20.0		107	70-130	8	30
1,2-Dichloroethane	**20.7**		µg/kg		20.0		104	70-130	5	30
1,1-Dichloroethene	**18.9**		µg/kg		20.0		94	70-130	2	30
cis-1,2-Dichloroethene	**20.2**		µg/kg		20.0		101	70-130	4	30
trans-1,2-Dichloroethene	**20.1**		µg/kg		20.0		101	70-130	3	30
1,2-Dichloropropane	**20.6**		µg/kg		20.0		103	70-130	4	30
1,3-Dichloropropane	**19.6**		µg/kg		20.0		98	70-130	0.8	30
2,2-Dichloropropane	**19.6**		µg/kg		20.0		98	70-130	2	30
1,1-Dichloropropene	**20.0**		µg/kg		20.0		100	70-130	7	30
cis-1,3-Dichloropropene	**19.7**		µg/kg		20.0		99	70-130	5	30

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Volatile Organic Compounds - Quality Control

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (2001880-BSD1)					Prepared & Analyzed: 29-Sep-20					
trans-1,3-Dichloropropene	**18.5**		µg/kg		20.0		93	70-130	4	30
Ethylbenzene	**19.5**		µg/kg		20.0		98	70-130	0.3	30
Hexachlorobutadiene	**19.2**		µg/kg		20.0		96	70-130	5	30
2-Hexanone (MBK)	**18.6**		µg/kg		20.0		93	70-130	11	30
Isopropylbenzene	**19.4**		µg/kg		20.0		97	70-130	0	30
4-Isopropyltoluene	**19.7**		µg/kg		20.0		98	70-130	3	30
Methyl tert-butyl ether	**19.0**		µg/kg		20.0		95	70-130	5	30
4-Methyl-2-pentanone (MIBK)	**19.3**		µg/kg		20.0		96	70-130	7	30
Methylene chloride	**17.8**		µg/kg		20.0		89	70-130	2	30
Naphthalene	**18.9**		µg/kg		20.0		95	70-130	0.6	30
n-Propylbenzene	**20.2**		µg/kg		20.0		101	70-130	1	30
Styrene	**19.4**		µg/kg		20.0		97	70-130	0	30
1,1,1,2-Tetrachloroethane	**19.6**		µg/kg		20.0		98	70-130	2	30
1,1,2,2-Tetrachloroethane	**19.6**		µg/kg		20.0		98	70-130	0.7	30
Tetrachloroethene	**19.3**		µg/kg		20.0		96	70-130	2	30
Toluene	**20.0**		µg/kg		20.0		100	70-130	0.9	30
1,2,3-Trichlorobenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
1,2,4-Trichlorobenzene	**19.3**		µg/kg		20.0		97	70-130	3	30
1,3,5-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130	4	30
1,1,1-Trichloroethane	**20.0**		µg/kg		20.0		100	70-130	2	30
1,1,2-Trichloroethane	**20.3**		µg/kg		20.0		101	70-130	4	30
Trichloroethene	**19.7**		µg/kg		20.0		99	70-130	3	30
Trichlorofluoromethane (Freon 11)	**17.5**		µg/kg		20.0		87	70-130	0.3	30
1,2,3-Trichloropropane	**18.8**		µg/kg		20.0		94	70-130	5	30
1,2,4-Trimethylbenzene	**19.9**		µg/kg		20.0		99	70-130	0.8	30
1,3,5-Trimethylbenzene	**19.4**		µg/kg		20.0		97	70-130	0.3	30
Vinyl chloride	**22.9**		µg/kg		20.0		115	70-130	6	30
m,p-Xylene	**37.5**		µg/kg		40.0		94	70-130	0.3	30
o-Xylene	**19.3**		µg/kg		20.0		96	70-130	1	30
Tetrahydrofuran	**17.0**		µg/kg		20.0		85	70-130	9	30
Ethyl ether	**19.0**		µg/kg		20.0		95	70-130	5	30
Tert-amyl methyl ether	**21.0**		µg/kg		20.0		105	70-130	4	30
Ethyl tert-butyl ether	**19.4**		µg/kg		20.0		97	70-130	5	30
Di-isopropyl ether	**20.2**		µg/kg		20.0		101	70-130	8	30
Tert-Butanol / butyl alcohol	**168**		µg/kg		200		84	70-130	5	30
1,4-Dioxane	**166**		µg/kg		200		83	70-130	4	30
trans-1,4-Dichloro-2-butene	**18.8**		µg/kg		20.0		94	70-130	1	30
Ethanol	**298**		µg/kg		400		74	70-130	6	30
Surrogate: 4-Bromofluorobenzene	*49.2*		µg/kg wet		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*51.6*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.7*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane	*50.5*		µg/kg wet		*50.0*		*101*	*70-130*		
MRL Check (2001880-MRL1)					Prepared & Analyzed: 29-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**5.13**		µg/kg		5.00		103	0-200		
Acetone	**0.00**		µg/kg		5.00			0-200		
Acrylonitrile	**5.32**		µg/kg		5.00		106	0-200		
Benzene	**4.96**		µg/kg		5.00		99	0-200		
Bromobenzene	**4.93**		µg/kg		5.00		99	0-200		
Bromochloromethane	**5.47**		µg/kg		5.00		109	0-200		
Bromodichloromethane	**5.89**		µg/kg		5.00		118	0-200		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001880 - SW846 5035A Soil (low level)										
MRL Check (2001880-MRL1)					Prepared & Analyzed: 29-Sep-20					
Bromoform	**5.24**		µg/kg		5.00		105	0-200		
Bromomethane	**6.79**		µg/kg		5.00		136	0-200		
2-Butanone (MEK)	**0.00**		µg/kg		5.00			0-200		
n-Butylbenzene	**5.10**		µg/kg		5.00		102	0-200		
sec-Butylbenzene	**4.94**		µg/kg		5.00		99	0-200		
tert-Butylbenzene	**4.25**		µg/kg		5.00		85	0-200		
Carbon disulfide	**5.57**		µg/kg		5.00		111	0-200		
Carbon tetrachloride	**4.64**		µg/kg		5.00		93	0-200		
Chlorobenzene	**5.35**		µg/kg		5.00		107	0-200		
Chloroethane	**29.4**		µg/kg		5.00		588	0-200		
Chloroform	**5.62**		µg/kg		5.00		112	0-200		
Chloromethane	**5.07**		µg/kg		5.00		101	0-200		
2-Chlorotoluene	**5.02**		µg/kg		5.00		100	0-200		
4-Chlorotoluene	**4.96**		µg/kg		5.00		99	0-200		
1,2-Dibromo-3-chloropropane	**5.23**		µg/kg		5.00		105	0-200		
Dibromochloromethane	**4.93**		µg/kg		5.00		99	0-200		
1,2-Dibromoethane (EDB)	**5.35**		µg/kg		5.00		107	0-200		
Dibromomethane	**4.89**		µg/kg		5.00		98	0-200		
1,2-Dichlorobenzene	**5.62**		µg/kg		5.00		112	0-200		
1,3-Dichlorobenzene	**5.34**		µg/kg		5.00		107	0-200		
1,4-Dichlorobenzene	**5.70**		µg/kg		5.00		114	0-200		
Dichlorodifluoromethane (Freon12)	**4.53**		µg/kg		5.00		91	0-200		
1,1-Dichloroethane	**5.57**		µg/kg		5.00		111	0-200		
1,2-Dichloroethane	**5.37**		µg/kg		5.00		107	0-200		
1,1-Dichloroethene	**4.97**		µg/kg		5.00		99	0-200		
cis-1,2-Dichloroethene	**4.77**		µg/kg		5.00		95	0-200		
trans-1,2-Dichloroethene	**5.22**		µg/kg		5.00		104	0-200		
1,2-Dichloropropane	**5.51**		µg/kg		5.00		110	0-200		
1,3-Dichloropropane	**5.30**		µg/kg		5.00		106	0-200		
2,2-Dichloropropane	**4.97**		µg/kg		5.00		99	0-200		
1,1-Dichloropropene	**4.59**		µg/kg		5.00		92	0-200		
cis-1,3-Dichloropropene	**4.74**		µg/kg		5.00		95	0-200		
trans-1,3-Dichloropropene	**4.55**		µg/kg		5.00		91	0-200		
Ethylbenzene	**5.14**		µg/kg		5.00		103	0-200		
Hexachlorobutadiene	**5.19**		µg/kg		5.00		104	0-200		
2-Hexanone (MBK)	**5.06**		µg/kg		5.00		101	0-200		
Isopropylbenzene	**4.85**		µg/kg		5.00		97	0-200		
4-Isopropyltoluene	**4.63**		µg/kg		5.00		93	0-200		
Methyl tert-butyl ether	**4.53**		µg/kg		5.00		91	0-200		
4-Methyl-2-pentanone (MIBK)	**5.26**		µg/kg		5.00		105	0-200		
Methylene chloride	**5.10**		µg/kg		5.00		102	0-200		
Naphthalene	**4.64**		µg/kg		5.00		93	0-200		
n-Propylbenzene	**5.99**		µg/kg		5.00		120	0-200		
Styrene	**4.46**		µg/kg		5.00		89	0-200		
1,1,1,2-Tetrachloroethane	**5.13**		µg/kg		5.00		103	0-200		
1,1,2,2-Tetrachloroethane	**5.91**		µg/kg		5.00		118	0-200		
Tetrachloroethene	**4.66**		µg/kg		5.00		93	0-200		
Toluene	**5.05**		µg/kg		5.00		101	0-200		
1,2,3-Trichlorobenzene	**5.06**		µg/kg		5.00		101	0-200		
1,2,4-Trichlorobenzene	**5.31**		µg/kg		5.00		106	0-200		

Volatile Organic Compounds - Quality Control

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

MRL Check (2001880-MRL1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,3,5-Trichlorobenzene	**5.30**		µg/kg		5.00		106	0-200		
1,1,1-Trichloroethane	**5.01**		µg/kg		5.00		100	0-200		
1,1,2-Trichloroethane	**6.33**		µg/kg		5.00		127	0-200		
Trichloroethene	**4.89**		µg/kg		5.00		98	0-200		
Trichlorofluoromethane (Freon 11)	**4.54**		µg/kg		5.00		91	0-200		
1,2,3-Trichloropropane	**5.32**		µg/kg		5.00		106	0-200		
1,2,4-Trimethylbenzene	**4.67**		µg/kg		5.00		93	0-200		
1,3,5-Trimethylbenzene	**4.40**		µg/kg		5.00		88	0-200		
Vinyl chloride	**5.85**		µg/kg		5.00		117	0-200		
m,p-Xylene	**8.95**		µg/kg		10.0		90	0-200		
o-Xylene	**4.49**		µg/kg		5.00		90	0-200		
Tetrahydrofuran	**4.60**		µg/kg		5.00		92	0-200		
Ethyl ether	**4.62**		µg/kg		5.00		92	0-200		
Tert-amyl methyl ether	**6.14**		µg/kg		5.00		123	0-200		
Ethyl tert-butyl ether	**4.79**		µg/kg		5.00		96	0-200		
Di-isopropyl ether	**4.94**		µg/kg		5.00		99	0-200		
Tert-Butanol / butyl alcohol	**52.0**		µg/kg		50.0		104	0-200		
1,4-Dioxane	**43.5**		µg/kg		50.0		87	0-200		
trans-1,4-Dichloro-2-butene	**4.44**		µg/kg		5.00		89	0-200		
Ethanol	**86.1**		µg/kg		100		86	0-200		
Surrogate: 4-Bromofluorobenzene	*47.2*		µg/kg wet		*50.0*		*94*	*70-130*		
Surrogate: Toluene-d8	*51.0*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.0*		µg/kg wet		*50.0*		*106*	*70-130*		
Surrogate: Dibromofluoromethane	*50.3*		µg/kg wet		*50.0*		*101*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Blank (2001800-BLK1)					Prepared & Analyzed: 22-Sep-20					
Acenaphthene	< 66.7		µg/kg wet	66.7						
Acenaphthylene	< 66.7		µg/kg wet	66.7						
Aniline	< 330		µg/kg wet	330						
Anthracene	< 66.7		µg/kg wet	66.7						
Azobenzene/Diphenyldiazene	< 330		µg/kg wet	330						
Benzidine	< 660		µg/kg wet	660						
Benzo (a) anthracene	< 66.7		µg/kg wet	66.7						
Benzo (a) pyrene	< 66.7		µg/kg wet	66.7						
Benzo (b) fluoranthene	< 66.7		µg/kg wet	66.7						
Benzo (g,h,i) perylene	< 66.7		µg/kg wet	66.7						
Benzo (k) fluoranthene	< 66.7		µg/kg wet	66.7						
Benzoic acid	< 330		µg/kg wet	330						
Benzyl alcohol	< 330		µg/kg wet	330						
Bis(2-chloroethoxy)methane	< 330		µg/kg wet	330						
Bis(2-chloroethyl)ether	< 167		µg/kg wet	167						
Bis(2-chloroisopropyl)ether	< 167		µg/kg wet	167						
Bis(2-ethylhexyl)phthalate	< 167		µg/kg wet	167						
4-Bromophenyl phenyl ether	< 330		µg/kg wet	330						
Butyl benzyl phthalate	< 330		µg/kg wet	330						
Carbazole	< 167		µg/kg wet	167						
4-Chloro-3-methylphenol	< 330		µg/kg wet	330						
4-Chloroaniline	< 167		µg/kg wet	167						
2-Chloronaphthalene	< 330		µg/kg wet	330						
2-Chlorophenol	< 167		µg/kg wet	167						
4-Chlorophenyl phenyl ether	< 330		µg/kg wet	330						
Chrysene	< 66.7		µg/kg wet	66.7						
Dibenzo (a,h) anthracene	< 66.7		µg/kg wet	66.7						
Dibenzofuran	< 167		µg/kg wet	167						
1,2-Dichlorobenzene	< 330		µg/kg wet	330						
1,3-Dichlorobenzene	< 330		µg/kg wet	330						
1,4-Dichlorobenzene	< 330		µg/kg wet	330						
3,3´-Dichlorobenzidine	< 330		µg/kg wet	330						
2,4-Dichlorophenol	< 167		µg/kg wet	167						
Diethyl phthalate	< 330		µg/kg wet	330						
Dimethyl phthalate	< 330		µg/kg wet	330						
2,4-Dimethylphenol	< 330		µg/kg wet	330						
Di-n-butyl phthalate	< 330		µg/kg wet	330						
4,6-Dinitro-2-methylphenol	< 330		µg/kg wet	330						
2,4-Dinitrophenol	< 330		µg/kg wet	330						
2,4-Dinitrotoluene	< 167		µg/kg wet	167						
2,6-Dinitrotoluene	< 167		µg/kg wet	167						
Di-n-octyl phthalate	< 330		µg/kg wet	330						
Fluoranthene	< 66.7		µg/kg wet	66.7						
Fluorene	< 66.7		µg/kg wet	66.7						
Hexachlorobenzene	< 167		µg/kg wet	167						
Hexachlorobutadiene	< 167		µg/kg wet	167						
Hexachlorocyclopentadiene	< 167		µg/kg wet	167						
Hexachloroethane	< 167		µg/kg wet	167						
Indeno (1,2,3-cd) pyrene	< 66.7		µg/kg wet	66.7						
Isophorone	< 167		µg/kg wet	167						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Blank (2001800-BLK1)					Prepared & Analyzed: 22-Sep-20					
2-Methylnaphthalene	< 66.7		µg/kg wet	66.7						
2-Methylphenol	< 330		µg/kg wet	330						
3 & 4-Methylphenol	< 330		µg/kg wet	330						
Naphthalene	< 66.7		µg/kg wet	66.7						
2-Nitroaniline	< 330		µg/kg wet	330						
3-Nitroaniline	< 330		µg/kg wet	330						
4-Nitroaniline	< 167		µg/kg wet	167						
Nitrobenzene	< 167		µg/kg wet	167						
2-Nitrophenol	< 167		µg/kg wet	167						
4-Nitrophenol	< 1320		µg/kg wet	1320						
N-Nitrosodimethylamine	< 167		µg/kg wet	167						
N-Nitrosodi-n-propylamine	< 167		µg/kg wet	167						
N-Nitrosodiphenylamine	< 330		µg/kg wet	330						
Pentachlorophenol	< 330		µg/kg wet	330						
Phenanthrene	< 66.7		µg/kg wet	66.7						
Phenol	< 330		µg/kg wet	330						
Pyrene	< 66.7		µg/kg wet	66.7						
Pyridine	< 330		µg/kg wet	330						
1,2,4-Trichlorobenzene	< 330		µg/kg wet	330						
1-Methylnaphthalene	< 66.7		µg/kg wet	66.7						
2,4,5-Trichlorophenol	< 330		µg/kg wet	330						
2,4,6-Trichlorophenol	< 167		µg/kg wet	167						
Pentachloronitrobenzene	< 330		µg/kg wet	330						
1,2,4,5-Tetrachlorobenzene	< 330		µg/kg wet	330						
Surrogate: 2-Fluorobiphenyl	*731*		µg/kg wet		*1670*		*44*	*30-130*		
Surrogate: 2-Fluorophenol	*1200*		µg/kg wet		*1670*		*72*	*30-130*		
Surrogate: Nitrobenzene-d5	*1370*		µg/kg wet		*1670*		*82*	*30-130*		
Surrogate: Phenol-d5	*1160*		µg/kg wet		*1670*		*70*	*30-130*		
Surrogate: Terphenyl-dl4	*1140*		µg/kg wet		*1670*		*68*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1020*		µg/kg wet		*1670*		*61*	*30-130*		
LCS (2001800-BS1)					Prepared & Analyzed: 22-Sep-20					
Acenaphthene	**946**		µg/kg wet	66.7	1670		57	40-140		
Acenaphthylene	**1120**		µg/kg wet	66.7	1670		67	40-140		
Aniline	**656**	QC6	µg/kg wet	330	1670		39	40-140		
Anthracene	**1210**		µg/kg wet	66.7	1670		73	40-140		
Azobenzene/Diphenyldiazene	**1440**		µg/kg wet	330	1670		87	40-140		
Benzidine	**211**	QC6	µg/kg wet	660	1670		13	40-140		
Benzo (a) anthracene	**1350**		µg/kg wet	66.7	1670		81	40-140		
Benzo (a) pyrene	**1430**		µg/kg wet	66.7	1670		86	40-140		
Benzo (b) fluoranthene	**1550**		µg/kg wet	66.7	1670		93	40-140		
Benzo (g,h,i) perylene	**1490**		µg/kg wet	66.7	1670		89	40-140		
Benzo (k) fluoranthene	**1230**		µg/kg wet	66.7	1670		74	40-140		
Benzoic acid	**262**	QC6	µg/kg wet	330	1670		16	30-130		
Benzyl alcohol	**1070**		µg/kg wet	330	1670		64	40-140		
Bis(2-chloroethoxy)methane	**1220**		µg/kg wet	330	1670		73	40-140		
Bis(2-chloroethyl)ether	**1060**		µg/kg wet	167	1670		64	40-140		
Bis(2-chloroisopropyl)ether	**874**		µg/kg wet	167	1670		52	40-140		
Bis(2-ethylhexyl)phthalate	**1260**		µg/kg wet	167	1670		76	40-140		
4-Bromophenyl phenyl ether	**329**	QC6	µg/kg wet	330	1670		20	40-140		
Butyl benzyl phthalate	**1330**		µg/kg wet	330	1670		80	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
LCS (2001800-BS1)					Prepared & Analyzed: 22-Sep-20					
Carbazole	**1290**		µg/kg wet	167	1670		77	40-140		
4-Chloro-3-methylphenol	**1360**		µg/kg wet	330	1670		82	30-130		
4-Chloroaniline	**845**		µg/kg wet	167	1670		51	40-140		
2-Chloronaphthalene	**1180**		µg/kg wet	330	1670		71	40-140		
2-Chlorophenol	**987**		µg/kg wet	167	1670		59	30-130		
4-Chlorophenyl phenyl ether	**1280**		µg/kg wet	330	1670		77	40-140		
Chrysene	**1240**		µg/kg wet	66.7	1670		75	40-140		
Dibenzo (a,h) anthracene	**1450**		µg/kg wet	66.7	1670		87	40-140		
Dibenzofuran	**1180**		µg/kg wet	167	1670		71	40-140		
1,2-Dichlorobenzene	**1320**		µg/kg wet	330	1670		79	40-140		
1,3-Dichlorobenzene	**1190**		µg/kg wet	330	1670		72	40-140		
1,4-Dichlorobenzene	**1170**		µg/kg wet	330	1670		70	40-140		
3,3´-Dichlorobenzidine	**1260**		µg/kg wet	330	1670		76	40-140		
2,4-Dichlorophenol	**1260**		µg/kg wet	167	1670		76	30-130		
Diethyl phthalate	**1070**		µg/kg wet	330	1670		64	40-140		
Dimethyl phthalate	**1250**		µg/kg wet	330	1670		75	40-140		
2,4-Dimethylphenol	**1080**		µg/kg wet	330	1670		65	30-130		
Di-n-butyl phthalate	**1140**		µg/kg wet	330	1670		69	40-140		
4,6-Dinitro-2-methylphenol	**907**		µg/kg wet	330	1670		54	30-130		
2,4-Dinitrophenol	**584**		µg/kg wet	330	1670		35	30-130		
2,4-Dinitrotoluene	**1200**		µg/kg wet	167	1670		72	40-140		
2,6-Dinitrotoluene	**1340**		µg/kg wet	167	1670		80	40-140		
Di-n-octyl phthalate	**1250**		µg/kg wet	330	1670		75	40-140		
Fluoranthene	**816**		µg/kg wet	66.7	1670		49	40-140		
Fluorene	**1100**		µg/kg wet	66.7	1670		66	40-140		
Hexachlorobenzene	**1520**		µg/kg wet	167	1670		91	40-140		
Hexachlorobutadiene	**1300**		µg/kg wet	167	1670		78	40-140		
Hexachlorocyclopentadiene	**1310**		µg/kg wet	167	1670		78	40-140		
Hexachloroethane	**1170**		µg/kg wet	167	1670		70	40-140		
Indeno (1,2,3-cd) pyrene	**1690**		µg/kg wet	66.7	1670		101	40-140		
Isophorone	**1050**		µg/kg wet	167	1670		63	40-140		
2-Methylnaphthalene	**986**		µg/kg wet	66.7	1670		59	40-140		
2-Methylphenol	**1120**		µg/kg wet	330	1670		67	30-130		
3 & 4-Methylphenol	**1060**		µg/kg wet	330	1670		64	30-130		
Naphthalene	**1170**		µg/kg wet	66.7	1670		70	40-140		
2-Nitroaniline	**932**		µg/kg wet	330	1670		56	40-140		
3-Nitroaniline	**794**		µg/kg wet	330	1670		48	40-140		
4-Nitroaniline	**1180**		µg/kg wet	167	1670		71	40-140		
Nitrobenzene	**1340**		µg/kg wet	167	1670		80	40-140		
2-Nitrophenol	**1110**		µg/kg wet	167	1670		67	30-130		
4-Nitrophenol	**1180**		µg/kg wet	1320	1670		71	30-130		
N-Nitrosodimethylamine	**988**		µg/kg wet	167	1670		59	40-140		
N-Nitrosodi-n-propylamine	**870**		µg/kg wet	167	1670		52	40-140		
N-Nitrosodiphenylamine	**1500**		µg/kg wet	330	1670		90	40-140		
Pentachlorophenol	**933**		µg/kg wet	330	1670		56	30-130		
Phenanthrene	**1190**		µg/kg wet	66.7	1670		71	40-140		
Phenol	**1290**		µg/kg wet	330	1670		77	30-130		
Pyrene	**811**		µg/kg wet	66.7	1670		49	40-140		
Pyridine	**546**	QC6	µg/kg wet	330	1670		33	40-140		
1,2,4-Trichlorobenzene	**1380**		µg/kg wet	330	1670		83	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
LCS (2001800-BS1)					Prepared & Analyzed: 22-Sep-20					
1-Methylnaphthalene	**959**		µg/kg wet	66.7	1670		58	40-140		
2,4,5-Trichlorophenol	**1130**		µg/kg wet	330	1670		68	30-130		
2,4,6-Trichlorophenol	**872**		µg/kg wet	167	1670		52	30-130		
Pentachloronitrobenzene	**1470**		µg/kg wet	330	1670		88	40-140		
1,2,4,5-Tetrachlorobenzene	**1080**		µg/kg wet	330	1670		65	40-140		
Surrogate: 2-Fluorobiphenyl	*827*		µg/kg wet		*1670*		*50*	*30-130*		
Surrogate: 2-Fluorophenol	*1010*		µg/kg wet		*1670*		*60*	*30-130*		
Surrogate: Nitrobenzene-d5	*1180*		µg/kg wet		*1670*		*71*	*30-130*		
Surrogate: Phenol-d5	*1130*		µg/kg wet		*1670*		*68*	*30-130*		
Surrogate: Terphenyl-dl4	*1280*		µg/kg wet		*1670*		*77*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1180*		µg/kg wet		*1670*		*71*	*30-130*		
LCS Dup (2001800-BSD1)					Prepared & Analyzed: 22-Sep-20					
Acenaphthene	**1080**		µg/kg wet	66.7	1670		65	40-140	13	30
Acenaphthylene	**1170**		µg/kg wet	66.7	1670		70	40-140	4	30
Aniline	**686**		µg/kg wet	330	1670		41	40-140	5	30
Anthracene	**1320**		µg/kg wet	66.7	1670		79	40-140	8	30
Azobenzene/Diphenyldiazene	**1500**		µg/kg wet	330	1670		90	40-140	4	30
Benzidine	**221**	QC6	µg/kg wet	660	1670		13	40-140	4	30
Benzo (a) anthracene	**1490**		µg/kg wet	66.7	1670		89	40-140	10	30
Benzo (a) pyrene	**1590**		µg/kg wet	66.7	1670		96	40-140	10	30
Benzo (b) fluoranthene	**1740**		µg/kg wet	66.7	1670		104	40-140	11	30
Benzo (g,h,i) perylene	**1620**		µg/kg wet	66.7	1670		97	40-140	8	30
Benzo (k) fluoranthene	**1330**		µg/kg wet	66.7	1670		80	40-140	8	30
Benzoic acid	**322**	QC6	µg/kg wet	330	1670		19	30-130	21	30
Benzyl alcohol	**1170**		µg/kg wet	330	1670		70	40-140	9	30
Bis(2-chloroethoxy)methane	**1170**		µg/kg wet	330	1670		70	40-140	4	30
Bis(2-chloroethyl)ether	**1030**		µg/kg wet	167	1670		62	40-140	3	30
Bis(2-chloroisopropyl)ether	**858**		µg/kg wet	167	1670		51	40-140	2	30
Bis(2-ethylhexyl)phthalate	**1370**		µg/kg wet	167	1670		82	40-140	8	30
4-Bromophenyl phenyl ether	**354**	QC6	µg/kg wet	330	1670		21	40-140	7	30
Butyl benzyl phthalate	**1430**		µg/kg wet	330	1670		86	40-140	7	30
Carbazole	**1400**		µg/kg wet	167	1670		84	40-140	8	30
4-Chloro-3-methylphenol	**1410**		µg/kg wet	330	1670		84	30-130	3	30
4-Chloroaniline	**877**		µg/kg wet	167	1670		53	40-140	4	30
2-Chloronaphthalene	**1200**		µg/kg wet	330	1670		72	40-140	2	30
2-Chlorophenol	**1060**		µg/kg wet	167	1670		63	30-130	7	30
4-Chlorophenyl phenyl ether	**1300**		µg/kg wet	330	1670		78	40-140	1	30
Chrysene	**1310**		µg/kg wet	66.7	1670		79	40-140	5	30
Dibenzo (a,h) anthracene	**1540**		µg/kg wet	66.7	1670		93	40-140	6	30
Dibenzofuran	**1270**		µg/kg wet	167	1670		76	40-140	7	30
1,2-Dichlorobenzene	**1270**		µg/kg wet	330	1670		76	40-140	4	30
1,3-Dichlorobenzene	**1130**		µg/kg wet	330	1670		68	40-140	5	30
1,4-Dichlorobenzene	**1250**		µg/kg wet	330	1670		75	40-140	7	30
3,3´-Dichlorobenzidine	**1380**		µg/kg wet	330	1670		83	40-140	8	30
2,4-Dichlorophenol	**1310**		µg/kg wet	167	1670		78	30-130	3	30
Diethyl phthalate	**1150**		µg/kg wet	330	1670		69	40-140	7	30
Dimethyl phthalate	**1330**		µg/kg wet	330	1670		80	40-140	7	30
2,4-Dimethylphenol	**1080**		µg/kg wet	330	1670		65	30-130	0.09	30
Di-n-butyl phthalate	**1260**		µg/kg wet	330	1670		75	40-140	9	30
4,6-Dinitro-2-methylphenol	**992**		µg/kg wet	330	1670		60	30-130	9	30

Semivolatile Organic Compounds by GCMS - Quality Control

SW846 8270D

Batch 2001800 - SW846 3546

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (2001800-BSD1)					Prepared & Analyzed: 22-Sep-20					
2,4-Dinitrophenol	**709**		µg/kg wet	330	1670		43	30-130	19	30
2,4-Dinitrotoluene	**1260**		µg/kg wet	167	1670		76	40-140	5	30
2,6-Dinitrotoluene	**1350**		µg/kg wet	167	1670		81	40-140	1	30
Di-n-octyl phthalate	**1400**		µg/kg wet	330	1670		84	40-140	12	30
Fluoranthene	**880**		µg/kg wet	66.7	1670		53	40-140	8	30
Fluorene	**1150**		µg/kg wet	66.7	1670		69	40-140	5	30
Hexachlorobenzene	**1620**		µg/kg wet	167	1670		97	40-140	7	30
Hexachlorobutadiene	**1230**		µg/kg wet	167	1670		74	40-140	5	30
Hexachlorocyclopentadiene	**1310**		µg/kg wet	167	1670		79	40-140	0.2	30
Hexachloroethane	**1180**		µg/kg wet	167	1670		71	40-140	0.7	30
Indeno (1,2,3-cd) pyrene	**1840**		µg/kg wet	66.7	1670		110	40-140	9	30
Isophorone	**1020**		µg/kg wet	167	1670		61	40-140	3	30
2-Methylnaphthalene	**1000**		µg/kg wet	66.7	1670		60	40-140	1	30
2-Methylphenol	**1110**		µg/kg wet	330	1670		67	30-130	0.7	30
3 & 4-Methylphenol	**1160**		µg/kg wet	330	1670		69	30-130	9	30
Naphthalene	**1140**		µg/kg wet	66.7	1670		68	40-140	3	30
2-Nitroaniline	**1050**		µg/kg wet	330	1670		63	40-140	12	30
3-Nitroaniline	**886**		µg/kg wet	330	1670		53	40-140	11	30
4-Nitroaniline	**1270**		µg/kg wet	167	1670		76	40-140	8	30
Nitrobenzene	**1290**		µg/kg wet	167	1670		77	40-140	4	30
2-Nitrophenol	**1060**		µg/kg wet	167	1670		64	30-130	5	30
4-Nitrophenol	**1290**		µg/kg wet	1320	1670		77	30-130	9	30
N-Nitrosodimethylamine	**905**		µg/kg wet	167	1670		54	40-140	9	30
N-Nitrosodi-n-propylamine	**874**		µg/kg wet	167	1670		52	40-140	0.4	30
N-Nitrosodiphenylamine	**1590**		µg/kg wet	330	1670		95	40-140	6	30
Pentachlorophenol	**1060**		µg/kg wet	330	1670		64	30-130	13	30
Phenanthrene	**1300**		µg/kg wet	66.7	1670		78	40-140	9	30
Phenol	**1070**		µg/kg wet	330	1670		64	30-130	18	30
Pyrene	**873**		µg/kg wet	66.7	1670		52	40-140	7	30
Pyridine	**710**		µg/kg wet	330	1670		43	40-140	26	30
1,2,4-Trichlorobenzene	**1350**		µg/kg wet	330	1670		81	40-140	3	30
1-Methylnaphthalene	**1020**		µg/kg wet	66.7	1670		61	40-140	6	30
2,4,5-Trichlorophenol	**1180**		µg/kg wet	330	1670		71	30-130	5	30
2,4,6-Trichlorophenol	**925**		µg/kg wet	167	1670		55	30-130	6	30
Pentachloronitrobenzene	**1540**		µg/kg wet	330	1670		92	40-140	5	30
1,2,4,5-Tetrachlorobenzene	**1150**		µg/kg wet	330	1670		69	40-140	6	30
Surrogate: 2-Fluorobiphenyl	*816*		µg/kg wet		*1670*		*49*	*30-130*		
Surrogate: 2-Fluorophenol	*1060*		µg/kg wet		*1670*		*63*	*30-130*		
Surrogate: Nitrobenzene-d5	*1180*		µg/kg wet		*1670*		*71*	*30-130*		
Surrogate: Phenol-d5	*1120*		µg/kg wet		*1670*		*67*	*30-130*		
Surrogate: Terphenyl-dl4	*1380*		µg/kg wet		*1670*		*83*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1250*		µg/kg wet		*1670*		*75*	*30-130*		
Duplicate (2001800-DUP1)		R01	**Source: SC59391-01**		Prepared & Analyzed: 22-Sep-20					
Acenaphthene	< 377		µg/kg dry	377		BRL				30
Acenaphthylene	**494**		µg/kg dry	377		527			6	30
Aniline	< 1870		µg/kg dry	1870		BRL				30
Anthracene	**270**	J	µg/kg dry	377		361			29	30
Azobenzene/Diphenyldiazene	< 1870		µg/kg dry	1870		BRL				30
Benzidine	< 3730		µg/kg dry	3730		BRL				30
Benzo (a) anthracene	**867**		µg/kg dry	377		1050			19	30

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Duplicate (2001800-DUP1)		R01	**Source: SC59391-01**			Prepared & Analyzed: 22-Sep-20				
Benzo (a) pyrene	**1000**		µg/kg dry	377		1290			25	30
Benzo (b) fluoranthene	**892**		µg/kg dry	377		980			9	30
Benzo (g,h,i) perylene	**852**		µg/kg dry	377		1090			24	30
Benzo (k) fluoranthene	**545**	QR9	µg/kg dry	377		909			50	30
Benzoic acid	**516**	J	µg/kg dry	1870		578			11	30
Benzyl alcohol	< 1870		µg/kg dry	1870		BRL				30
Bis(2-chloroethoxy)methane	< 1870		µg/kg dry	1870		BRL				30
Bis(2-chloroethyl)ether	< 944		µg/kg dry	944		BRL				30
Bis(2-chloroisopropyl)ether	< 944		µg/kg dry	944		BRL				30
Bis(2-ethylhexyl)phthalate	< 944		µg/kg dry	944		BRL				30
4-Bromophenyl phenyl ether	< 1870		µg/kg dry	1870		BRL				30
Butyl benzyl phthalate	< 1870		µg/kg dry	1870		BRL				30
Carbazole	< 944		µg/kg dry	944		BRL				30
4-Chloro-3-methylphenol	< 1870		µg/kg dry	1870		BRL				30
4-Chloroaniline	< 944		µg/kg dry	944		BRL				30
2-Chloronaphthalene	< 1870		µg/kg dry	1870		BRL				30
2-Chlorophenol	< 944		µg/kg dry	944		BRL				30
4-Chlorophenyl phenyl ether	< 1870		µg/kg dry	1870		BRL				30
Chrysene	**829**		µg/kg dry	377		1010			20	30
Dibenzo (a,h) anthracene	**281**	J	µg/kg dry	377		367			27	30
Dibenzofuran	< 944		µg/kg dry	944		BRL				30
1,2-Dichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
1,3-Dichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
1,4-Dichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
3,3´-Dichlorobenzidine	< 1870		µg/kg dry	1870		BRL				30
2,4-Dichlorophenol	< 944		µg/kg dry	944		BRL				30
Diethyl phthalate	< 1870		µg/kg dry	1870		BRL				30
Dimethyl phthalate	< 1870		µg/kg dry	1870		BRL				30
2,4-Dimethylphenol	< 1870		µg/kg dry	1870		BRL				30
Di-n-butyl phthalate	< 1870		µg/kg dry	1870		BRL				30
4,6-Dinitro-2-methylphenol	< 1870		µg/kg dry	1870		BRL				30
2,4-Dinitrophenol	< 1870		µg/kg dry	1870		320				30
2,4-Dinitrotoluene	< 944		µg/kg dry	944		BRL				30
2,6-Dinitrotoluene	< 944		µg/kg dry	944		BRL				30
Di-n-octyl phthalate	< 1870		µg/kg dry	1870		BRL				30
Fluoranthene	**899**		µg/kg dry	377		848			6	30
Fluorene	< 377		µg/kg dry	377		BRL				30
Hexachlorobenzene	< 944		µg/kg dry	944		BRL				30
Hexachlorobutadiene	< 944		µg/kg dry	944		BRL				30
Hexachlorocyclopentadiene	< 944		µg/kg dry	944		BRL				30
Hexachloroethane	< 944		µg/kg dry	944		BRL				30
Indeno (1,2,3-cd) pyrene	**714**		µg/kg dry	377		905			24	30
Isophorone	< 944		µg/kg dry	944		BRL				30
2-Methylnaphthalene	< 377		µg/kg dry	377		BRL				30
2-Methylphenol	< 1870		µg/kg dry	1870		BRL				30
3 & 4-Methylphenol	< 1870		µg/kg dry	1870		BRL				30
Naphthalene	< 377		µg/kg dry	377		BRL				30
2-Nitroaniline	< 1870		µg/kg dry	1870		BRL				30
3-Nitroaniline	< 1870		µg/kg dry	1870		BRL				30
4-Nitroaniline	< 944		µg/kg dry	944		BRL				30

Semivolatile Organic Compounds by GCMS - Quality Control

SW846 8270D

Batch 2001800 - SW846 3546

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (2001800-DUP1)		R01	**Source: SC59391-01**		Prepared & Analyzed: 22-Sep-20					
Nitrobenzene	< 944		µg/kg dry	944		BRL				30
2-Nitrophenol	< 944		µg/kg dry	944		BRL				30
4-Nitrophenol	< 7460		µg/kg dry	7460		BRL				30
N-Nitrosodimethylamine	< 944		µg/kg dry	944		BRL				30
N-Nitrosodi-n-propylamine	< 944		µg/kg dry	944		BRL				30
N-Nitrosodiphenylamine	< 1870		µg/kg dry	1870		BRL				30
Pentachlorophenol	< 1870		µg/kg dry	1870		BRL				30
Phenanthrene	**303**	J,QR4	µg/kg dry	377		455			40	30
Phenol	< 1870		µg/kg dry	1870		BRL				30
Pyrene	**1010**		µg/kg dry	377		835			19	30
Pyridine	< 1870		µg/kg dry	1870		BRL				30
1,2,4-Trichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
1-Methylnaphthalene	< 377		µg/kg dry	377		BRL				30
2,4,5-Trichlorophenol	< 1870		µg/kg dry	1870		BRL				30
2,4,6-Trichlorophenol	< 944		µg/kg dry	944		BRL				30
Pentachloronitrobenzene	< 1870		µg/kg dry	1870		BRL				30
1,2,4,5-Tetrachlorobenzene	< 1870		µg/kg dry	1870		BRL				30
Surrogate: 2-Fluorobiphenyl	*1490*		µg/kg dry		*1880*		*79*	*30-130*		
Surrogate: 2-Fluorophenol	*1550*		µg/kg dry		*1880*		*82*	*30-130*		
Surrogate: Nitrobenzene-d5	*1560*		µg/kg dry		*1880*		*83*	*30-130*		
Surrogate: Phenol-d5	*1600*		µg/kg dry		*1880*		*85*	*30-130*		
Surrogate: Terphenyl-dl4	*1380*		µg/kg dry		*1880*		*73*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1180*		µg/kg dry		*1880*		*63*	*30-130*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8100Mod.										
Batch 2001798 - SW846 3546										
Blank (2001798-BLK1)					Prepared & Analyzed: 22-Sep-20					
Total Petroleum Hydrocarbons	< 13.3		mg/kg wet	13.3						
Surrogate: o-Terphenyl	*4.67*		mg/kg wet		*6.67*		*70*	*40-140*		
Surrogate: 1-Chlorooctadecane	*5.53*		mg/kg wet		*6.67*		*83*	*40-140*		
LCS (2001798-BS1)					Prepared & Analyzed: 22-Sep-20					
Total Petroleum Hydrocarbons	**265**		mg/kg wet	13.3	333		79	40-140		
Surrogate: o-Terphenyl	*5.65*		mg/kg wet		*6.67*		*85*	*40-140*		
Surrogate: 1-Chlorooctadecane	*6.13*		mg/kg wet		*6.67*		*92*	*40-140*		
LCS Dup (2001798-BSD1)					Prepared & Analyzed: 22-Sep-20					
Total Petroleum Hydrocarbons	**254**		mg/kg wet	13.3	333		76	40-140	4	30
Surrogate: o-Terphenyl	*5.44*		mg/kg wet		*6.67*		*82*	*40-140*		
Surrogate: 1-Chlorooctadecane	*5.92*		mg/kg wet		*6.67*		*89*	*40-140*		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

SW846 6010C

Batch 2001784 - SW846 3050B

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2001784-BLK1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	< 1.56		mg/kg wet	1.56						
Cadmium	< 0.521		mg/kg wet	0.521						
Chromium	< 1.04		mg/kg wet	1.04						
Lead	< 1.56		mg/kg wet	1.56						
Selenium	< 1.56		mg/kg wet	1.56						
Silver	< 3.12		mg/kg wet	3.12						
Sulfur	< 26.0		mg/kg wet	26.0						
Barium	< 1.04		mg/kg wet	1.04						
LCS (2001784-BS1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Sulfur	**113**		mg/kg wet	26.2	131		87	85-115		
LCS Dup (2001784-BSD1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Sulfur	**110**		mg/kg wet	25.2	126		87	85-115	3	30
Duplicate (2001784-DUP1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**22.7**		mg/kg dry	1.71		23.3			2	20
Cadmium	< 0.570		mg/kg dry	0.570		BRL				20
Chromium	**18.8**		mg/kg dry	1.14		17.7			6	20
Lead	**20.6**		mg/kg dry	1.71		20.1			2	20
Selenium	< 1.71		mg/kg dry	1.71		BRL				20
Silver	< 3.42		mg/kg dry	3.42		BRL				20
Sulfur	**207**		mg/kg dry	28.5		184			12	20
Barium	**56.9**		mg/kg dry	1.14		55.5			2	20
Matrix Spike (2001784-MS1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**145**		mg/kg dry	1.71	142	23.3	85	75-125		
Cadmium	**119**		mg/kg dry	0.569	142	BRL	83	75-125		
Chromium	**157**		mg/kg dry	1.14	142	17.7	98	75-125		
Lead	**136**		mg/kg dry	1.71	142	20.1	81	75-125		
Selenium	**117**		mg/kg dry	1.71	142	BRL	82	75-125		
Silver	**96.8**	QM7	mg/kg dry	3.42	142	BRL	68	75-125		
Sulfur	**294**		mg/kg dry	28.5	142	184	77	70-130		
Barium	**210**		mg/kg dry	1.14	142	55.5	108	75-125		
Matrix Spike Dup (2001784-MSD1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**145**		mg/kg dry	1.71	143	23.3	85	75-125	0.4	20
Cadmium	**118**		mg/kg dry	0.571	143	BRL	82	75-125	0.8	20
Chromium	**154**		mg/kg dry	1.14	143	17.7	95	75-125	2	20
Lead	**147**		mg/kg dry	1.71	143	20.1	89	75-125	8	20
Selenium	**120**		mg/kg dry	1.71	143	BRL	84	75-125	2	20
Silver	**93.9**	QM7	mg/kg dry	3.43	143	BRL	66	75-125	3	20
Sulfur	**289**		mg/kg dry	28.5	143	184	74	70-130	1	20
Barium	**197**		mg/kg dry	1.14	143	55.5	99	75-125	6	20
Post Spike (2001784-PS1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**165**		mg/kg dry	1.84	153	23.3	92	80-120		
Cadmium	**139**		mg/kg dry	0.612	153	BRL	91	80-120		
Chromium	**174**		mg/kg dry	1.22	153	17.7	102	80-120		
Lead	**155**		mg/kg dry	1.84	153	20.1	88	80-120		
Selenium	**136**		mg/kg dry	1.84	153	BRL	89	80-120		
Sulfur	**310**		mg/kg dry	30.6	153	184	82	80-120		
Barium	**205**		mg/kg dry	1.22	153	55.5	98	80-120		
Reference (2001784-SRM1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**85.4**		mg/kg wet	1.50	105		82	70.1-107.7		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 6010C										
Batch 2001784 - SW846 3050B										
Reference (2001784-SRM1)					Prepared: 22-Sep-20			Analyzed: 23-Sep-20		
Cadmium	**120**		mg/kg wet	0.500	150		80	70.2-106.7		
Chromium	**136**		mg/kg wet	1.00	156		87	72.3-111.6		
Lead	**80.8**		mg/kg wet	1.50	93.0		87	73-116.9		
Selenium	**35.4**		mg/kg wet	1.50	45.4		78	74.1-112.2		
Silver	**33.8**		mg/kg wet	3.00	41.3		82	69.3-117.3		
Barium	**293**		mg/kg wet	1.00	322		91	77.2-110.3		
Reference (2001784-SRM2)					Prepared: 22-Sep-20			Analyzed: 23-Sep-20		
Arsenic	**78.1**		mg/kg wet	1.50	101		78	70.1-107.7		
Cadmium	**112**		mg/kg wet	0.500	144		77	70.2-106.7		
Chromium	**129**		mg/kg wet	1.00	150		86	72.3-111.6		
Lead	**76.8**		mg/kg wet	1.50	89.5		86	73-116.9		
Selenium	**32.6**		mg/kg wet	1.50	43.7		75	74.1-112.2		
Silver	**32.3**		mg/kg wet	3.00	39.7		81	69.3-117.3		
Barium	**268**		mg/kg wet	1.00	310		86	77.2-110.3		
SW846 7471B										
Batch 2001785 - EPA200/SW7000 Series										
Blank (2001785-BLK1)					Prepared: 22-Sep-20			Analyzed: 29-Sep-20		
Mercury	< 0.0297		mg/kg wet	0.0297						
Reference (2001785-SRM1)					Prepared: 22-Sep-20			Analyzed: 29-Sep-20		
Mercury	**6.22**	D	mg/kg wet	0.600	8.81		71	42.1-100		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 9012_ReactiveCN										
Batch 551420 - 7.3.3										
Duplicate (1754602X)			**Source: SC59391-02**			Prepared: 27-Sep-20 Analyzed: 28-Sep-20				
Cyanide, Reactive	< 10		mg/kg	10		BRL		-	NC	20
Blank (5514201AB)						Prepared: 27-Sep-20 Analyzed: 28-Sep-20				
Cyanide, Reactive	< 10		mg/kg	10				-		
LCS (5514202AQ)						Prepared: 27-Sep-20 Analyzed: 28-Sep-20				
Cyanide, Reactive	**304**		mg/kg	200	1000		30	10-100		
SW846 9034_Reactive										
Batch 551421 - 7.3.4										
Duplicate (1754602X)			**Source: SC59391-02**			Prepared: 27-Sep-20 Analyzed: 28-Sep-20				
Sulfide, Reactive	< 10		mg/kg	10		BRL		-	NC	20
Blank (5514211AB)						Prepared: 27-Sep-20 Analyzed: 28-Sep-20				
Sulfide, Reactive	< 10		mg/kg	10				-		
LCS (5514212AQ)						Prepared: 27-Sep-20 Analyzed: 28-Sep-20				
Sulfide, Reactive	**741**		mg/kg	10	960		77	10-100		

Notes and Definitions

BsH	Data for this analyte may be biased high based on QC spike recoveries.
D	Data reported from a dilution
IS1	Internal standard out due to matrix interference
QC6	Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR4	Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
R01	The Reporting Limit has been raised to account for matrix interference.
S02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
SGCMSVOC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogates with three required by program methods.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

Gasoline - includes regular, unleaded, premium, etc.
Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
Fuel Oil #4 - includes #4 fuel oil
Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
Motor Oil - includes virgin and waste automobile oil
Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
Aviation Fuel - includes kerosene, Jet A and JP-4
Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as Calculated as.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC59391 E/M

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Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☒ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: ______

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Drive
Chelmsford MA
Telephone #: 978-853-1561
Project Mgr: Ryan McCarthy

Invoice To: SAME

P.O No.: ______ Quote #: ______

Project No: ______
Site Name: ROCHESTER NH MCP
Location: ROCHESTER State: NH
Sampler(s): S. HOWE

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= Ice 12= ______

List Preservative Code below: 7 9 11

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= ______ X2= ______ X3= ______

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of ~~Amber~~ Clear Glass	# of Clear Glass	# of Plastic	8260	8260	8260, 8270, REACTIVITY/ CYANIDE/ SULFIDE, SULFUR, RCRA8, TPH						Check if chlorinated
										7	9	11						
SC59391-01	TrenchA_0-6	9/18/20	0850	C	SO	3	2			1	2	2						☐
-02	TrenchB_0-6	↓	0910	〃	〃	〃	〃			〃	〃	〃						☐
-03	TrenchD_0-6	↓	1009	〃	〃	〃	〃			〃	〃	〃						☐
-04	TrenchC_0-6	↓	0942	〃	〃	〃	〃			〃	〃	〃						☐
-05	HDDB_5-10	↓	1110	〃	〃	〃	〃			〃	〃	〃						☐
-06	HDDA_5-10	↓	1040	〃	〃	〃	〃			〃	〃	〃						☐
-07	HDDC_5-10	↓	1138	〃	〃	〃	〃			〃	〃	〃						☐
																		☐
																		☐
																		☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☒ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ______
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
		9/21/20	11:15	Observed 1.3
		9/21/20	16:40	Correction Factor +1
				Corrected 2.3
				IR ID # 6

☒ EDD format: EQuIS
☒ E-mail to: COLIN.CALLAHAN@AECOM.COM

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☑ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

SC59391 EM

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Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed:

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Drive
Chelmsford MA
Telephone #: 978-853-1561
Project Mgr: Ryan McCarthy

Invoice To: SAME
P.O No.:
Quote #:

Project No:
Site Name: ROCHESTER NH MGP
Location: ROCHESTER
State: NH
Sampler(s): S. HOWE

F=Field Filtered 1=Na2S2O3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= ice 12=

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= X2= X3=

G= Grab C=Compsite

						Containers					List Preservative Code below: / Analysis *								
											7	9	11						
Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of ~~Amber~~ Clear Glass	# of Clear Glass	# of Plastic		8260	8260	8260, 8270, REACTIVITY/CYANIDE/SULFIDE, SULFUR, RCRA, TPH						Check if chlorinated
SC59391-01	TrenchA_0-6	9/18/20	0850	C	SO	3	2				1	2	2						☐
-02	TrenchB_0-6		0910																☐
-03	TrenchD_0-6		1009																☐
-04	TrenchC_0-6		0942																☐
-05	HDDB_5-10		1110																☐
-06	HDDA_5-10		1040																☐
-07	HDDC_5-10		1138																☐
08	Trip Blank										X	X							☐
																			☐
																			☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☒ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other:
State-specific reporting standards:

* 8100 per Colin. — 9/24

TB added per Colin — 9/24

Relinquished by:	Received by:	Date:	Time:	Temp °C
		9/21/20	11:15	Observed 1.3
		9/21/20	16:40	Correction Factor +1
				Corrected 2.3
				IR ID # 6

☒ EDD format: EQuIS
☒ E-mail to: COLIN.CALLAHAN@AECOM.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

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646 Camp Ave
North Kingstown, RI 02852
(413) 789-9018

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	***Client ID***	***Analysis***	***Added***
SC59391-01	TrenchA_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-02	TrenchB_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-03	TrenchD_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-04	TrenchC_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-05	HDDB_5-10	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-06	HDDA_5-10	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-07	HDDC_5-10	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-08	Trip Blank	Volatile Organic Compounds by SW846 8260	9/28/2020

Batch Summary

2001784

Total Metals by EPA 6000/7000 Series Methods

2001784-BLK1
2001784-BS1
2001784-BSD1
2001784-DUP1
2001784-MS1
2001784-MSD1
2001784-PS1
2001784-SRM1
2001784-SRM2
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001785

Total Metals by EPA 6000/7000 Series Methods

2001785-BLK1
2001785-SRM1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001790

General Chemistry Parameters

SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001798

Extractable Petroleum Hydrocarbons

2001798-BLK1
2001798-BS1
2001798-BSD1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001800

Semivolatile Organic Compounds by GCMS

2001800-BLK1
2001800-BS1
2001800-BSD1
2001800-DUP1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001812

Volatile Organic Compounds

2001812-BLK1
2001812-BS1
2001812-BSD1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)
SC59391-08 (Trip Blank)

2001826

Volatile Organic Compounds

2001826-BLK1
2001826-BS1
2001826-BSD1
2001826-MRL1
SC59391-01 (TrenchA_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)
SC59391-08 (Trip Blank)

2001880

Volatile Organic Compounds

2001880-BLK1
2001880-BS1
2001880-BSD1
2001880-MRL1
SC59391-02 (TrenchB_0-6)

551420

Subcontracted Analyses

1754602X
5514201AB
5514202AQ
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

551421

Subcontracted Analyses

1754602X
5514211AB
5514212AQ
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

Appendix B Laboratory Report - Drilling Mud Characterization

eurofins
Environment Testing
New England

☑ Final Report
☐ Revised Report

Report Date:
24-Dec-20 15:22

Laboratory Report
SC60301

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Colin Callahan

Project: Unitil - Rochester, NH
Project #: Unitil - HDD

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Connecticut # PH-0722
Massachusetts # RI907
New Jersey DEP - NELAP # RI008
New Hampshire # 2240
New York # 11393
Rhode Island # LAI00368
USDA # P330-20-00109

Eurofins Environment Testing New England holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 51 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Environment Testing New England.

Eurofins Environment Testing New England is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Environment Testing New England is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.eurofinsus.com/Spectrum for a full listing of our current certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 413-789-9018 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC60301

Project: Unitil - Rochester, NH

Project Number: Unitil - HDD

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC60301-01	HDD-01-S	Sludge	18-Dec-20 12:52	22-Dec-20 17:50
SC60301-02	HDD-01-M	Sludge	18-Dec-20 13:37	22-Dec-20 17:50
SC60301-03	HDD-02-ME	Sludge	21-Dec-20 11:00	22-Dec-20 17:50

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as “<” (less than) the reporting limit in this report.

The samples were received 2.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

Reactivity (40 CFR 261.23) Case Narrative:

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2) and (4); however, Eurofins Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Reactive sulfide and cyanide are tested at a pH of 2 and not tested at all conditions between pH 2 and12.5 as stated in 40 CFR 261.23, section (5); thus reactive cyanide and sulfide results as reported in this document can not be used to support the nonreactive properties of these samples.

The responsibility falls on the generator to use knowledge of the waste to determine if the waste meets or does not meet the descriptive, prose definition of reactivity.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 1311/6010C

Blanks:

2002969-BLK1

The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.

Silver

Duplicates:

2002969-DUP1 *Source: SC60301-03*

SW846 1311/6010C

Duplicates:

2002969-DUP1 *Source: SC60301-03*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Arsenic
Selenium

MRL raised to correlate to batch QC reporting limits.

Chromium

Samples:

SC60301-02 *HDD-01-M*

MRL raised to correlate to batch QC reporting limits.

Chromium

SC60301-03 *HDD-02-ME*

MRL raised to correlate to batch QC reporting limits.

Chromium

SW846 1311/7470A

Duplicates:

2002970-DUP1 *Source: SC60301-03*

The Reporting Limit has been raised to account for matrix interference.

Mercury

Samples:

SC60301-02 *HDD-01-M*

The Reporting Limit has been raised to account for matrix interference.

Mercury

SC60301-03 *HDD-02-ME*

The Reporting Limit has been raised to account for matrix interference.

Mercury

SW846 1311/8260C

Blanks:

2002976-BLK2

The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.

Chlorobenzene

Laboratory Control Samples:

2002976-BS1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Chlorobenzene

SW846 1311/8260C

Laboratory Control Samples:

2002976-BSD1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Chlorobenzene

SW846 6010C

Laboratory Control Samples:

2002965 SRM/SRMD

Arsenic percent recoveries (83/78) are outside individual acceptance criteria (82.7-117.9), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDD-01-S

Barium percent recoveries (86/82) are outside individual acceptance criteria (82.6-117.4), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDD-01-S

Selenium percent recoveries (77/70) are outside individual acceptance criteria (79.1-120.9), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDD-01-S

Silver percent recoveries (139/153) are outside individual acceptance criteria (80.6-119.8), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

HDD-01-S

Duplicates:

2002965-DUP1 *Source: SC60301-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Arsenic

SW846 8270D

Laboratory Control Samples:

2002981 BS/BSD

2,4-Dinitrophenol percent recoveries (25/32) are outside individual acceptance criteria (30-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDD-01-S

Aniline percent recoveries (32/35) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDD-01-S

Benzoic acid percent recoveries (15/17) are outside individual acceptance criteria (30-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDD-01-S

2002981-BS1

SW846 8270D

Laboratory Control Samples:

2002981-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

2,4-Dinitrophenol
Aniline
Benzoic acid

2002981-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Aniline
Benzoic acid

SW846 9045D

Samples:

SC60301-02 *HDD-01-M*

This sample was received outside the EPA recommended holding time for the analysis specified.

pH

SC60301-03 *HDD-02-ME*

This sample was received outside the EPA recommended holding time for the analysis specified.

pH

Sample Acceptance Check Form

Client: AECOM Environment - Chelmsford, MA

Project: Unitil - Rochester, NH / Unitil - HDD

Work Order: SC60301

Sample(s) received on: 12/22/2020

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☐	☑	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC60301-01 **Client ID:** HDD-01-S

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Total Solids @ 104C	19.4		0.1	%	SM2540B-11
Barium	51.5		6.53	mg/kg	SW846 6010C
Chromium	12.8		6.53	mg/kg	SW846 6010C
Lead	26.0		9.80	mg/kg	SW846 6010C
Sulfur	735		163	mg/kg	SW846 6010C
Total Petroleum Hydrocarbons	865		76.8	mg/kg	SW846 8100Mod.
1,2,4-Trimethylbenzene	1600	D	736	µg/kg	SW846 8260C
Ethylbenzene	2550	D	736	µg/kg	SW846 8260C
Naphthalene	106000	E, D	736	µg/kg	SW846 8260C
1-Methylnaphthalene	9030		398	µg/kg	SW846 8270D
2-Methylnaphthalene	13700		398	µg/kg	SW846 8270D
Acenaphthene	1440		398	µg/kg	SW846 8270D
Acenaphthylene	7840		398	µg/kg	SW846 8270D
Anthracene	4500		398	µg/kg	SW846 8270D
Benzo (a) anthracene	3170		398	µg/kg	SW846 8270D
Benzo (a) pyrene	3170		398	µg/kg	SW846 8270D
Benzo (b) fluoranthene	1750		398	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	1410		398	µg/kg	SW846 8270D
Benzo (k) fluoranthene	1350		398	µg/kg	SW846 8270D
Chrysene	2820		398	µg/kg	SW846 8270D
Fluoranthene	5190		398	µg/kg	SW846 8270D
Fluorene	4790		398	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	1150		398	µg/kg	SW846 8270D
Naphthalene	23800	D	1990	µg/kg	SW846 8270D
Phenanthrene	12900		398	µg/kg	SW846 8270D
Pyrene	5540		398	µg/kg	SW846 8270D

Lab ID: SC60301-01RE1 **Client ID:** HDD-01-S

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,2,4-Trimethylbenzene	1470	D	1470	µg/kg	SW846 8260C
Ethylbenzene	2560	D	1470	µg/kg	SW846 8260C
Naphthalene	101000	D	1470	µg/kg	SW846 8260C

Lab ID: SC60301-02 **Client ID:** HDD-01-M

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Total Solids @ 104C	18.0		0.1	%	SM2540B-11
Barium	0.183		0.100	mg/l	SW846 1311/6010C
Lead	0.0823		0.0150	mg/l	SW846 1311/6010C

Lab ID: SC60301-03 **Client ID:** HDD-02-ME

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Total Solids @ 104C	58.0		0.1	%	SM2540B-11
Barium	0.192		0.100	mg/l	SW846 1311/6010C
Chromium	0.0397	R06	0.0200	mg/l	SW846 1311/6010C
Lead	0.0654		0.0150	mg/l	SW846 1311/6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-S SC60301-01	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level)

Initial weight: 9.2 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 736	D	µg/kg dry	736	404	50	SW846 8260C	23-Dec-20	23-Dec-20	MED	2002975	X
67-64-1	Acetone	< 7360	D	µg/kg dry	7360	931	50	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 736	D	µg/kg dry	736	266	50	"	"	"	"	"	X
71-43-2	Benzene	< 736	D	µg/kg dry	736	118	50	"	"	"	"	"	X
108-86-1	Bromobenzene	< 736	D	µg/kg dry	736	166	50	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 736	D	µg/kg dry	736	105	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 736	D	µg/kg dry	736	190	50	"	"	"	"	"	X
75-25-2	Bromoform	< 736	D	µg/kg dry	736	158	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 1470	D	µg/kg dry	1470	364	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 1470	D	µg/kg dry	1470	336	50	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 736	D	µg/kg dry	736	295	50	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 736	D	µg/kg dry	736	226	50	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 736	D	µg/kg dry	736	300	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 1470	D	µg/kg dry	1470	272	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 736	D	µg/kg dry	736	220	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 736	D	µg/kg dry	736	89.1	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 1470	D	µg/kg dry	1470	328	50	"	"	"	"	"	X
67-66-3	Chloroform	< 736	D	µg/kg dry	736	86.9	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 1470	D	µg/kg dry	1470	875	50	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 736	D	µg/kg dry	736	183	50	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 736	D	µg/kg dry	736	133	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 1470	D	µg/kg dry	1470	291	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 736	D	µg/kg dry	736	116	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 736	D	µg/kg dry	736	200	50	"	"	"	"	"	X
74-95-3	Dibromomethane	< 736	D	µg/kg dry	736	138	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 736	D	µg/kg dry	736	133	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 736	D	µg/kg dry	736	183	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 736	D	µg/kg dry	736	132	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 1470	D	µg/kg dry	1470	963	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 736	D	µg/kg dry	736	170	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 736	D	µg/kg dry	736	193	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 736	D	µg/kg dry	736	188	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 736	D	µg/kg dry	736	245	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 736	D	µg/kg dry	736	168	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 736	D	µg/kg dry	736	256	50	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 736	D	µg/kg dry	736	233	50	"	"	"	"	"	X
594-20-7	2,2-Dichloropropane	< 736	D	µg/kg dry	736	194	50	"	"	"	"	"	X
563-58-6	1,1-Dichloropropene	< 736	D	µg/kg dry	736	225	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 736	D	µg/kg dry	736	174	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 736	D	µg/kg dry	736	300	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	**2,550**	D	µg/kg dry	736	154	50	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 736	D	µg/kg dry	736	236	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 1470	D	µg/kg dry	1470	490	50	"	"	"	"	"	X

Sample Identification **HDD-01-S** SC60301-01	Client Project #	Matrix	Collection Date/Time	Received
	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Initial weight: 9.2 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
98-82-8	Isopropylbenzene	< 736	D	µg/kg dry	736	267	50	SW846 8260C	23-Dec-20	23-Dec-20	MED	2002975	X
99-87-6	4-Isopropyltoluene	< 736	D	µg/kg dry	736	204	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 736	D	µg/kg dry	736	222	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 1470	D	µg/kg dry	1470	527	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 1470	D	µg/kg dry	1470	629	50	"	"	"	"	"	X
91-20-3	Naphthalene	**106,000**	E, D	µg/kg dry	736	214	50	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 736	D	µg/kg dry	736	183	50	"	"	"	"	"	X
100-42-5	Styrene	< 736	D	µg/kg dry	736	97.2	50	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 736	D	µg/kg dry	736	177	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 736	D	µg/kg dry	736	233	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 736	D	µg/kg dry	736	232	50	"	"	"	"	"	X
108-88-3	Toluene	< 736	D	µg/kg dry	736	119	50	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 736	D	µg/kg dry	736	172	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 736	D	µg/kg dry	736	121	50	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 736	D	µg/kg dry	736	116	50	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 736	D	µg/kg dry	736	178	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 736	D	µg/kg dry	736	228	50	"	"	"	"	"	X
79-01-6	Trichloroethene	< 736	D	µg/kg dry	736	126	50	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 736	D	µg/kg dry	736	333	50	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 736	D	µg/kg dry	736	339	50	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	**1,600**	D	µg/kg dry	736	186	50	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 736	D	µg/kg dry	736	154	50	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 736	D	µg/kg dry	736	362	50	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 1470	D	µg/kg dry	1470	433	50	"	"	"	"	"	X
95-47-6	o-Xylene	< 736	D	µg/kg dry	736	227	50	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 1470	D	µg/kg dry	1470	538	50	"	"	"	"	"	
60-29-7	Ethyl ether	< 736	D	µg/kg dry	736	200	50	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 736	D	µg/kg dry	736	407	50	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 736	D	µg/kg dry	736	204	50	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 736	D	µg/kg dry	736	238	50	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 14700	D	µg/kg dry	14700	10500	50	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 14700	D	µg/kg dry	14700	4340	50	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 3680	D	µg/kg dry	3680	486	50	"	"	"	"	"	X
64-17-5	Ethanol	< 147000	D	µg/kg dry	147000	12700	50	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*108*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*101*			*70-130 %*			"	"	"	"	"	

Re-analysis of Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level)

Initial weight: 9.2 g

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-S SC60301-01	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

Volatile Organic Compounds

Re-analysis of Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level)

Initial weight: 9.2 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1470	D	µg/kg dry	1470	807	100	SW846 8260C	24-Dec-20	24-Dec-20	DDP	2002995	X
67-64-1	Acetone	< 14700	D	µg/kg dry	14700	1860	100	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 1470	D	µg/kg dry	1470	532	100	"	"	"	"	"	X
71-43-2	Benzene	< 1470	D	µg/kg dry	1470	236	100	"	"	"	"	"	X
108-86-1	Bromobenzene	< 1470	D	µg/kg dry	1470	333	100	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 1470	D	µg/kg dry	1470	211	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 1470	D	µg/kg dry	1470	380	100	"	"	"	"	"	X
75-25-2	Bromoform	< 1470	D	µg/kg dry	1470	315	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 2950	D	µg/kg dry	2950	727	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 2950	D	µg/kg dry	2950	673	100	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 1470	D	µg/kg dry	1470	589	100	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 1470	D	µg/kg dry	1470	452	100	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 1470	D	µg/kg dry	1470	601	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 2950	D	µg/kg dry	2950	545	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 1470	D	µg/kg dry	1470	440	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1470	D	µg/kg dry	1470	178	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 2950	D	µg/kg dry	2950	657	100	"	"	"	"	"	X
67-66-3	Chloroform	< 1470	D	µg/kg dry	1470	174	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 2950	D	µg/kg dry	2950	1750	100	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 1470	D	µg/kg dry	1470	365	100	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 1470	D	µg/kg dry	1470	267	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 2950	D	µg/kg dry	2950	582	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 1470	D	µg/kg dry	1470	233	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 1470	D	µg/kg dry	1470	401	100	"	"	"	"	"	X
74-95-3	Dibromomethane	< 1470	D	µg/kg dry	1470	277	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1470	D	µg/kg dry	1470	265	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1470	D	µg/kg dry	1470	367	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1470	D	µg/kg dry	1470	264	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 2950	D	µg/kg dry	2950	1930	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1470	D	µg/kg dry	1470	340	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1470	D	µg/kg dry	1470	386	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1470	D	µg/kg dry	1470	377	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 1470	D	µg/kg dry	1470	490	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 1470	D	µg/kg dry	1470	336	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1470	D	µg/kg dry	1470	511	100	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 1470	D	µg/kg dry	1470	465	100	"	"	"	"	"	X
594-20-7	2,2-Dichloropropane	< 1470	D	µg/kg dry	1470	387	100	"	"	"	"	"	X
563-58-6	1,1-Dichloropropene	< 1470	D	µg/kg dry	1470	451	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 1470	D	µg/kg dry	1470	348	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 1470	D	µg/kg dry	1470	599	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	**2,560**	D	µg/kg dry	1470	308	100	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 1470	D	µg/kg dry	1470	471	100	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-S SC60301-01	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

Volatile Organic Compounds

Re-analysis of Volatile Organic Compounds by SW846 8260

Initial weight: 9.2 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
591-78-6	2-Hexanone (MBK)	< 2950	D	µg/kg dry	2950	979	100	SW846 8260C	24-Dec-20	24-Dec-20	DDP	2002995	X
98-82-8	Isopropylbenzene	< 1470	D	µg/kg dry	1470	535	100	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 1470	D	µg/kg dry	1470	408	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 1470	D	µg/kg dry	1470	443	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2950	D	µg/kg dry	2950	1050	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 2950	D	µg/kg dry	2950	1260	100	"	"	"	"	"	X
91-20-3	Naphthalene	**101,000**	D	µg/kg dry	1470	427	100	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 1470	D	µg/kg dry	1470	367	100	"	"	"	"	"	X
100-42-5	Styrene	< 1470	D	µg/kg dry	1470	194	100	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 1470	D	µg/kg dry	1470	355	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 1470	D	µg/kg dry	1470	467	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1470	D	µg/kg dry	1470	464	100	"	"	"	"	"	X
108-88-3	Toluene	< 1470	D	µg/kg dry	1470	237	100	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 1470	D	µg/kg dry	1470	343	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1470	D	µg/kg dry	1470	243	100	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 1470	D	µg/kg dry	1470	233	100	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 1470	D	µg/kg dry	1470	356	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1470	D	µg/kg dry	1470	455	100	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1470	D	µg/kg dry	1470	252	100	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1470	D	µg/kg dry	1470	666	100	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 1470	D	µg/kg dry	1470	679	100	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	**1,470**	D	µg/kg dry	1470	373	100	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 1470	D	µg/kg dry	1470	308	100	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 1470	D	µg/kg dry	1470	725	100	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 2950	D	µg/kg dry	2950	866	100	"	"	"	"	"	X
95-47-6	o-Xylene	< 1470	D	µg/kg dry	1470	454	100	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 2950	D	µg/kg dry	2950	1080	100	"	"	"	"	"	
60-29-7	Ethyl ether	< 1470	D	µg/kg dry	1470	399	100	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 1470	D	µg/kg dry	1470	814	100	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 1470	D	µg/kg dry	1470	408	100	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 1470	D	µg/kg dry	1470	476	100	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 29500	D	µg/kg dry	29500	20900	100	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 29500	D	µg/kg dry	29500	8670	100	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 7360	D	µg/kg dry	7360	972	100	"	"	"	"	"	X
64-17-5	Ethanol	< 295000	D	µg/kg dry	295000	25400	100	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*98*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*108*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-S SC60301-01	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds
Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
83-32-9	Acenaphthene	**1,440**		µg/kg dry	398	318	1	SW846 8270D	23-Dec-20	23-Dec-20	BJJ	2002981	X
208-96-8	Acenaphthylene	**7,840**		µg/kg dry	398	261	1	"	"	"	"	"	X
62-53-3	Aniline	< 1970		µg/kg dry	1970	151	1	"	"	"	"	"	X
120-12-7	Anthracene	**4,500**		µg/kg dry	398	230	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 1970		µg/kg dry	1970	336	1	"	"	"	"	"	
92-87-5	Benzidine	< 3940		µg/kg dry	3940	583	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**3,170**		µg/kg dry	398	224	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**3,170**		µg/kg dry	398	285	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**1,750**		µg/kg dry	398	330	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**1,410**		µg/kg dry	398	311	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**1,350**		µg/kg dry	398	310	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 1970		µg/kg dry	1970	1360	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 1970		µg/kg dry	1970	357	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 1970		µg/kg dry	1970	343	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 997		µg/kg dry	997	326	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 997		µg/kg dry	997	444	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 997		µg/kg dry	997	254	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 1970		µg/kg dry	1970	223	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 1970		µg/kg dry	1970	198	1	"	"	"	"	"	X
86-74-8	Carbazole	< 997		µg/kg dry	997	261	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 1970		µg/kg dry	1970	386	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 997		µg/kg dry	997	151	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 1970		µg/kg dry	1970	455	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 997		µg/kg dry	997	408	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 1970		µg/kg dry	1970	211	1	"	"	"	"	"	X
218-01-9	Chrysene	**2,820**		µg/kg dry	398	225	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 398		µg/kg dry	398	304	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 997		µg/kg dry	997	345	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1970		µg/kg dry	1970	380	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1970		µg/kg dry	1970	477	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1970		µg/kg dry	1970	464	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 1970		µg/kg dry	1970	325	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 997		µg/kg dry	997	397	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 1970		µg/kg dry	1970	216	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 1970		µg/kg dry	1970	257	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 1970		µg/kg dry	1970	289	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 1970		µg/kg dry	1970	211	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 1970		µg/kg dry	1970	354	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 1970		µg/kg dry	1970	518	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 997		µg/kg dry	997	239	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 997		µg/kg dry	997	233	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-S SC60301-01	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
117-84-0	Di-n-octyl phthalate	< 1970		µg/kg dry	1970	325	1	SW846 8270D	23-Dec-20	23-Dec-20	BJJ	2002981	X
206-44-0	Fluoranthene	**5,190**		µg/kg dry	398	233	1	"	"	"	"	"	X
86-73-7	Fluorene	**4,790**		µg/kg dry	398	364	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 997		µg/kg dry	997	276	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 997		µg/kg dry	997	497	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 997		µg/kg dry	997	381	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 997		µg/kg dry	997	392	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**1,150**		µg/kg dry	398	338	1	"	"	"	"	"	X
78-59-1	Isophorone	< 997		µg/kg dry	997	273	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	**13,700**		µg/kg dry	398	294	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 1970		µg/kg dry	1970	288	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 1970		µg/kg dry	1970	373	1	"	"	"	"	"	X
91-20-3	Naphthalene	**23,800**	D	µg/kg dry	1990	1910	5	"	"	23-Dec-20	"	"	X
88-74-4	2-Nitroaniline	< 1970		µg/kg dry	1970	187	1	"	"	23-Dec-20	"	"	X
99-09-2	3-Nitroaniline	< 1970		µg/kg dry	1970	176	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 997		µg/kg dry	997	315	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 997		µg/kg dry	997	460	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 997		µg/kg dry	997	354	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1970		µg/kg dry	1970	686	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 997		µg/kg dry	997	261	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 997		µg/kg dry	997	397	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 1970		µg/kg dry	1970	251	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 1970		µg/kg dry	1970	806	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**12,900**		µg/kg dry	398	226	1	"	"	"	"	"	X
108-95-2	Phenol	< 1970		µg/kg dry	1970	406	1	"	"	"	"	"	X
129-00-0	Pyrene	**5,540**		µg/kg dry	398	220	1	"	"	"	"	"	X
110-86-1	Pyridine	< 1970		µg/kg dry	1970	466	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1970		µg/kg dry	1970	451	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	**9,030**		µg/kg dry	398	334	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 1970		µg/kg dry	1970	226	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 997		µg/kg dry	997	244	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 1970		µg/kg dry	1970	210	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 1970		µg/kg dry	1970	350	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*48*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*65*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*51*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*61*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*65*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*58*			*30-130 %*			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Fingerprinting by GC
Prepared by method SW846 3546

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-S SC60301-01	Unitil - HDD	Sludge	18-Dec-20 12:52	22-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC													
Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	**865**		mg/kg dry	76.8	64.2	1	SW846 8100Mod.	23-Dec-20	23-Dec-20	JMS	2002977	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*48*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*47*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 9.80		mg/kg dry	9.80	1.06	1	SW846 6010C	23-Dec-20	23-Dec-20	EDT	2002965	X
7440-38-2	Arsenic	< 9.80		mg/kg dry	9.80	1.24	1	"	"	23-Dec-20	"	"	X
7440-39-3	Barium	**51.5**		mg/kg dry	6.53	0.771	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 3.27		mg/kg dry	3.27	0.169	1	"	"	"	"	"	X
7440-47-3	Chromium	**12.8**		mg/kg dry	6.53	0.869	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.157		mg/kg dry	0.157	0.0435	1	SW846 7471B	"	23-Dec-20	edt	2002966	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**26.0**		mg/kg dry	9.80	1.39	1	SW846 6010C	"	23-Dec-20	EDT	2002965	X
7782-49-2	Selenium	< 9.80		mg/kg dry	9.80	1.87	1	"	"	"	"	"	X
7704-34-9	Sulfur	**735**		mg/kg dry	163	11.2	1	"	"	23-Dec-20	"	"	
General Chemistry Parameters													
	% Solids	**16.7**		%			1	SM2540 G (11) Mod.	23-Dec-20	23-Dec-20	PN	2002934	
Subcontracted Analyses													
Prepared by method SM2540B-11													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Total Solids @ 104C	**19.4**		%	0.1	0.1	1	SM2540B-11	23-Dec-20 21:08	23-Dec-20 21:08	13693-A,	I557766A	
Prepared by method SW846 7.3.3.1/90													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity Cyanide	< 25		mg/kg	25	25	1	SW846 7.3.3.1/90	24-Dec-20	24-Dec-20 11:08	13693-A,	I557809A	
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity Sulfide	< 20		mg/kg	20	20	1	SW846 CH7	"	24-Dec-20 10:30	13693-A,	I557809B	
Prepared by method SW846-React													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity	**Negative**		Pos/Neg			1	SW846-React	24-Dec-20 10:31	24-Dec-20 10:31	13693-A,I	'[none]'	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-M SC60301-02	Unitil - HDD	Sludge	18-Dec-20 13:37	22-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Prepared by method SW846 1311/ZHE													
	TCLP Extraction	Completed		N/A			1	SW846 1311	22-Dec-20		EDT	2002968	X
TCLP Volatile Organic Compounds by GC/MS(TCL)													
Prepared by method SW846 5030 Water MS							Initial weight: 5 ml						
71-43-2	Benzene	< 10.0	D	µg/l	10.0	2.5	10	SW846 1311/8260C	23-Dec-20	23-Dec-20	MED	2002976	
78-93-3	2-Butanone (MEK)	< 20.0	D	µg/l	20.0	5.8	10	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 10.0	D	µg/l	10.0	2.5	10	"	"	"	"	"	
108-90-7	Chlorobenzene	< 10.0	D	µg/l	10.0	4.2	10	"	"	"	"	"	
67-66-3	Chloroform	< 10.0	D	µg/l	10.0	3.0	10	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 10.0	D	µg/l	10.0	2.6	10	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 10.0	D	µg/l	10.0	3.4	10	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 10.0	D	µg/l	10.0	3.6	10	"	"	"	"	"	
79-01-6	Trichloroethene	< 10.0	D	µg/l	10.0	3.6	10	"	"	"	"	"	
75-01-4	Vinyl chloride	< 10.0	D	µg/l	10.0	2.6	10	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*89*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
TCLP Extraction for Semivolatiles													
Prepared by method SW846 1311													
	TCLP Extraction	Completed		N/A			1	SW846 1311	22-Dec-20		EDT	2002967	X
	Final pH of leachate	5.03		N/A			1	"	"	"	"	"	
TCLP Semivolatiles (TCL)													
Prepared by method SW846 3510C													
106-46-7	1,4-Dichlorobenzene	< 50.0		µg/l	50.0	13.8	1	SW846 1311/8270D	23-Dec-20	23-Dec-20	BJJ	2002978	X
121-14-2	2,4-Dinitrotoluene	< 50.0		µg/l	50.0	7.19	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 50.0		µg/l	50.0	6.65	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 50.0		µg/l	50.0	12.4	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 50.0		µg/l	50.0	14.4	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 50.0		µg/l	50.0	9.93	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 100		µg/l	100	10.9	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 50.0		µg/l	50.0	11.2	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 200		µg/l	200	6.47	1	"	"	"	"	"	X
110-86-1	Pyridine	< 50.0		µg/l	50.0	22.4	1	"	"	"	"	"	X
95-95-4	2,4,5-Trichlorophenol	< 50.0		µg/l	50.0	7.59	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 50.0		µg/l	50.0	7.45	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*73*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*58*			*15-110 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*86*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*97*			*30-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													

***This laboratory report is not valid without an authorized signature on the cover page*.**

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-M SC60301-02	Unitil - HDD	Sludge	18-Dec-20 13:37	22-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls													
Prepared by method SW846 3550C													
12674-11-2	Aroclor-1016	< 82.0		µg/kg dry	82.0	59.1	1	SW846 8082A	23-Dec-20	23-Dec-20	JMS	2002980	X
11104-28-2	Aroclor-1221	< 82.0		µg/kg dry	82.0	24.2	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 82.0		µg/kg dry	82.0	22.7	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 82.0		µg/kg dry	82.0	7.79	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 82.0		µg/kg dry	82.0	25.6	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 82.0		µg/kg dry	82.0	63.8	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 82.0		µg/kg dry	82.0	17.6	1	"	"	"	"	"	X
37324-23-5	Aroclor-1262	< 82.0		µg/kg dry	82.0	19.1	1	"	"	"	"	"	X
11100-14-4	Aroclor-1268	< 82.0		µg/kg dry	82.0	17.5	1	"	"	"	"	"	X
Surrogate recoveries:													
877-09-8	*2,4,5,6-TC-M-Xylene (IS)*	*40*			*30-150 %*			"	"	"	"	"	
877-09-8	*2,4,5,6-TC-M-Xylene (IS) [2C]*	*34*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*66*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*58*			*30-150 %*			"	"	"	"	"	
TCLP Metals by EPA 1311 & 6000/7000 Series Methods													
TCLP Extraction for Hg													
Prepared by method SW846 1311													
	TCLP Extraction	**Completed**		N/A			1	SW846 1311	22-Dec-20		EDT	2002967	X
	Final pH of leachate	**5.03**		N/A			1	"	"	"	"	"	
TCLP Extraction for Metals													
	TCLP Extraction	**Completed**		N/A			1	"	"	"	"	"	X
	Final pH of leachate	**5.03**		N/A			1	"	"	"	"	"	
Prepared by method SW846 3010A													
7440-22-4	Silver	< 0.0100		mg/l	0.0100	0.0013	1	SW846 1311/6010C	23-Dec-20	24-Dec-20	edt	2002969	X
7440-38-2	Arsenic	< 0.0800		mg/l	0.0800	0.0029	1	"	"	24-Dec-20	"	"	X
7440-39-3	Barium	**0.183**		mg/l	0.100	0.0005	1	"	"	23-Dec-20	"	"	X
7440-43-9	Cadmium	< 0.0050		mg/l	0.0050	0.0004	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0200	R06	mg/l	0.0200	0.0010	1	"	"	24-Dec-20	"	"	X
7439-97-6	Mercury	< 0.00070	R01	mg/l	0.00070	0.00010	1	SW846 1311/7470A	"	23-Dec-20	edt	2002970	X
Prepared by method SW846 3010A													
7439-92-1	Lead	**0.0823**		mg/l	0.0150	0.0059	1	SW846 1311/6010C	"	24-Dec-20	edt	2002969	X
7782-49-2	Selenium	< 0.0300		mg/l	0.0300	0.0047	1	"	"	23-Dec-20	"	"	X
General Chemistry Parameters													
	% Solids	**18.2**		%			1	SM2540 G (11) Mod.	23-Dec-20	23-Dec-20	PN	2002934	
Toxicity Characteristics													
	pH	**7.01**	HT2,pH	pH Units			1	SW846 9045D	22-Dec-20 20:15	22-Dec-20 20:15	PN	2002972	X
Subcontracted Analyses													
Prepared by method SM2540B-11													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Total Solids @ 104C	**18.0**		%	0.1	0.1	1	SM2540B-11	23-Dec-20 21:08	23-Dec-20 21:08	13693-A,I557766A		
Prepared by method SW846 7.3.3.1/90													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-01-M SC60301-02	Unitil - HDD	Sludge	18-Dec-20 13:37	22-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Prepared by method SW846 7.3.3.1/90													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity Cyanide	< 27		mg/kg	27	27	1	SW846 7.3.3.1/90	24-Dec-20	24-Dec-20 11:11	13693-A,I	557809A	
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity Sulfide	< 20		mg/kg	20	20	1	SW846 CH7	"	24-Dec-20 10:30	13693-A,I	557809B	
Prepared by method SW846-React													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity	**Negative**		Pos/Neg			1	SW846-React	24-Dec-20 10:31	24-Dec-20 10:31	13693-A,I	'[none]'	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-02-ME SC60301-03	Unitil - HDD	Sludge	21-Dec-20 11:00	22-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.

Volatile Organic Compounds

Prepared by method SW846 1311/ZHE

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	TCLP Extraction	Completed		N/A			1	SW846 1311	22-Dec-20		EDT	2002968	X

TCLP Volatile Organic Compounds by GC/MS(TCL)

Prepared by method SW846 5030 Water MS

Initial weight: 5 ml

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
71-43-2	Benzene	< 10.0	D	µg/l	10.0	2.5	10	SW846 1311/8260C	23-Dec-20	23-Dec-20	MED	2002976	
78-93-3	2-Butanone (MEK)	< 20.0	D	µg/l	20.0	5.8	10	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 10.0	D	µg/l	10.0	2.5	10	"	"	"	"	"	
108-90-7	Chlorobenzene	< 10.0	D	µg/l	10.0	4.2	10	"	"	"	"	"	
67-66-3	Chloroform	< 10.0	D	µg/l	10.0	3.0	10	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 10.0	D	µg/l	10.0	2.6	10	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 10.0	D	µg/l	10.0	3.4	10	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 10.0	D	µg/l	10.0	3.6	10	"	"	"	"	"	
79-01-6	Trichloroethene	< 10.0	D	µg/l	10.0	3.6	10	"	"	"	"	"	
75-01-4	Vinyl chloride	< 10.0	D	µg/l	10.0	2.6	10	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*90*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

TCLP Extraction for Semivolatiles

Prepared by method SW846 1311

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	TCLP Extraction	Completed		N/A			1	SW846 1311	22-Dec-20		EDT	2002967	X
	Final pH of leachate	5.02		N/A			1	"	"	"	"	"	

TCLP Semivolatiles (TCL)

Prepared by method SW846 3510C

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
106-46-7	1,4-Dichlorobenzene	< 50.0		µg/l	50.0	13.8	1	SW846 1311/8270D	23-Dec-20	23-Dec-20	BJJ	2002978	X
121-14-2	2,4-Dinitrotoluene	< 50.0		µg/l	50.0	7.19	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 50.0		µg/l	50.0	6.65	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 50.0		µg/l	50.0	12.4	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 50.0		µg/l	50.0	14.4	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 50.0		µg/l	50.0	9.93	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 100		µg/l	100	10.9	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 50.0		µg/l	50.0	11.2	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 200		µg/l	200	6.47	1	"	"	"	"	"	X
110-86-1	Pyridine	< 50.0		µg/l	50.0	22.4	1	"	"	"	"	"	X
95-95-4	2,4,5-Trichlorophenol	< 50.0		µg/l	50.0	7.59	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 50.0		µg/l	50.0	7.45	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*73*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*79*			*15-110 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*82*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*97*			*30-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GC

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-02-ME SC60301-03	Unitil - HDD	Sludge	21-Dec-20 11:00	22-Dec-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls													
Prepared by method SW846 3550C													
12674-11-2	Aroclor-1016	< 26.3		µg/kg dry	26.3	19.0	1	SW846 8082A	23-Dec-20	23-Dec-20	JMS	2002980	X
11104-28-2	Aroclor-1221	< 26.3		µg/kg dry	26.3	7.78	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 26.3		µg/kg dry	26.3	7.29	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 26.3		µg/kg dry	26.3	2.50	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 26.3		µg/kg dry	26.3	8.23	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 26.3		µg/kg dry	26.3	20.5	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 26.3		µg/kg dry	26.3	5.66	1	"	"	"	"	"	X
37324-23-5	Aroclor-1262	< 26.3		µg/kg dry	26.3	6.13	1	"	"	"	"	"	X
11100-14-4	Aroclor-1268	< 26.3		µg/kg dry	26.3	5.61	1	"	"	"	"	"	X
Surrogate recoveries:													
877-09-8	*2,4,5,6-TC-M-Xylene (IS)*	*69*			*30-150 %*			"	"	"	"	"	
877-09-8	*2,4,5,6-TC-M-Xylene (IS) [2C]*	*63*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*74*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*73*			*30-150 %*			"	"	"	"	"	
TCLP Metals by EPA 1311 & 6000/7000 Series Methods													
TCLP Extraction for Hg													
Prepared by method SW846 1311													
	TCLP Extraction	**Completed**		N/A			1	SW846 1311	22-Dec-20		EDT	2002967	X
	Final pH of leachate	**5.02**		N/A			1	"	"	"	"	"	
TCLP Extraction for Metals													
	TCLP Extraction	**Completed**		N/A			1	"	"	"	"	"	X
	Final pH of leachate	**5.02**		N/A			1	"	"	"	"	"	
Prepared by method SW846 3010A													
7440-22-4	Silver	< 0.0100		mg/l	0.0100	0.0013	1	SW846 1311/6010C	23-Dec-20	24-Dec-20	edt	2002969	X
7440-38-2	Arsenic	< 0.0800		mg/l	0.0800	0.0029	1	"	"	24-Dec-20	"	"	X
7440-39-3	Barium	**0.192**		mg/l	0.100	0.0005	1	"	"	23-Dec-20	"	"	X
7440-43-9	Cadmium	< 0.0050		mg/l	0.0050	0.0004	1	"	"	"	"	"	X
7440-47-3	Chromium	**0.0397**	R06	mg/l	0.0200	0.0010	1	"	"	24-Dec-20	"	"	X
7439-97-6	Mercury	< 0.00070	R01	mg/l	0.00070	0.00010	1	SW846 1311/7470A	"	23-Dec-20	edt	2002970	X
Prepared by method SW846 3010A													
7439-92-1	Lead	**0.0654**		mg/l	0.0150	0.0059	1	SW846 1311/6010C	"	24-Dec-20	edt	2002969	X
7782-49-2	Selenium	< 0.0300		mg/l	0.0300	0.0047	1	"	"	23-Dec-20	"	"	X
General Chemistry Parameters													
	% Solids	**56.8**		%			1	SM2540 G (11) Mod.	23-Dec-20	23-Dec-20	PN	2002934	
Toxicity Characteristics													
	pH	**8.42**	HT2,pH	pH Units			1	SW846 9045D	22-Dec-20 20:15	22-Dec-20 20:15	PN	2002972	X
Subcontracted Analyses													
Prepared by method SM2540B-11													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Total Solids @ 104C	**58.0**		%	0.1	0.1	1	SM2540B-11	23-Dec-20 21:08	23-Dec-20 21:08	13693-A,I557766A		
Prepared by method SW846 7.3.3.1/90													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDD-02-ME SC60301-03	Unitil - HDD	Sludge	21-Dec-20 11:00	22-Dec-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Prepared by method SW846 7.3.3.1/90													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity Cyanide	< 8		mg/kg	8	8	1	SW846 7.3.3.1/90	24-Dec-20	24-Dec-20 11:12	13693-A,I	557809A	
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity Sulfide	< 20		mg/kg	20	20	1	SW846 CH7	"	24-Dec-20 10:30	13693-A,I	557809B	
Prepared by method SW846-React													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
	Reactivity	**Negative**		Pos/Neg			1	SW846-React	24-Dec-20 10:32	24-Dec-20 10:32	13693-A,I	'[none]'	

SW846 1311/8260C

Batch 2002976 - SW846 5030 Water MS

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2002976-BLK1)					Prepared & Analyzed: 23-Dec-20					
Benzene	< 1.0		µg/l	1.0						
2-Butanone (MEK)	< 2.0		µg/l	2.0						
Carbon tetrachloride	< 1.0		µg/l	1.0						
Chlorobenzene	< 1.0		µg/l	1.0						
Chloroform	< 1.0		µg/l	1.0						
1,2-Dichloroethane	< 1.0		µg/l	1.0						
1,1-Dichloroethene	< 1.0		µg/l	1.0						
Tetrachloroethene	< 1.0		µg/l	1.0						
Trichloroethene	< 1.0		µg/l	1.0						
Vinyl chloride	< 1.0		µg/l	1.0						
Surrogate: 4-Bromofluorobenzene	*48.0*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.1*		µg/l		*50.0*		*108*	*70-130*		
Surrogate: Dibromofluoromethane	*50.9*		µg/l		*50.0*		*102*	*70-130*		
Blank (2002976-BLK2)					Prepared & Analyzed: 23-Dec-20					
Benzene	< 1.0		µg/l	1.0						
2-Butanone (MEK)	< 2.0		µg/l	2.0						
Carbon tetrachloride	< 1.0		µg/l	1.0						
Chlorobenzene	**1.0**	QB2	µg/l	1.0						
Chloroform	< 1.0		µg/l	1.0						
1,2-Dichloroethane	< 1.0		µg/l	1.0						
1,1-Dichloroethene	< 1.0		µg/l	1.0						
Tetrachloroethene	< 1.0		µg/l	1.0						
Trichloroethene	< 1.0		µg/l	1.0						
Vinyl chloride	< 1.0		µg/l	1.0						
Surrogate: 4-Bromofluorobenzene	*43.3*		µg/l		*50.0*		*87*	*70-130*		
Surrogate: Toluene-d8	*53.2*		µg/l		*50.0*		*106*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.7*		µg/l		*50.0*		*109*	*70-130*		
Surrogate: Dibromofluoromethane	*51.4*		µg/l		*50.0*		*103*	*70-130*		
LCS (2002976-BS1)					Prepared & Analyzed: 23-Dec-20					
Benzene	**19.1**		µg/l		20.0		96	70-130		
2-Butanone (MEK)	**15.0**		µg/l		20.0		75	70-130		
Carbon tetrachloride	**20.6**		µg/l		20.0		103	70-130		
Chlorobenzene	**19.2**	B	µg/l		20.0		96	70-130		
Chloroform	**19.7**		µg/l		20.0		98	70-130		
1,2-Dichloroethane	**21.4**		µg/l		20.0		107	70-130		
1,1-Dichloroethene	**20.1**		µg/l		20.0		100	70-130		
Tetrachloroethene	**19.0**		µg/l		20.0		95	70-130		
Trichloroethene	**20.3**		µg/l		20.0		102	70-130		
Vinyl chloride	**19.2**		µg/l		20.0		96	70-130		
Surrogate: 4-Bromofluorobenzene	*49.6*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.3*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.4*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Dibromofluoromethane	*50.5*		µg/l		*50.0*		*101*	*70-130*		
LCS Dup (2002976-BSD1)					Prepared & Analyzed: 23-Dec-20					
Benzene	**19.3**		µg/l		20.0		97	70-130	1	20
2-Butanone (MEK)	**15.0**		µg/l		20.0		75	70-130	0	20
Carbon tetrachloride	**20.2**		µg/l		20.0		101	70-130	2	20
Chlorobenzene	**19.2**	B	µg/l		20.0		96	70-130	0.05	20

Volatile Organic Compounds - Quality Control

SW846 1311/8260C

Batch 2002976 - SW846 5030 Water MS

LCS Dup (2002976-BSD1) Prepared & Analyzed: 23-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Chloroform	**19.3**		µg/l		20.0		96	70-130	2	20
1,2-Dichloroethane	**20.7**		µg/l		20.0		103	70-130	4	20
1,1-Dichloroethene	**19.8**		µg/l		20.0		99	70-130	1	20
Tetrachloroethene	**19.1**		µg/l		20.0		96	70-130	0.8	20
Trichloroethene	**20.0**		µg/l		20.0		100	70-130	2	20
Vinyl chloride	**20.2**		µg/l		20.0		101	70-130	5	20
Surrogate: 4-Bromofluorobenzene	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*51.6*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.3*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane	*51.5*		µg/l		*50.0*		*103*	*70-130*		

SW846 8260C

Batch 2002975 - SW846 5035A Soil (high level)

Blank (2002975-BLK1) Prepared & Analyzed: 23-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	D	µg/kg wet	50.0						
Acetone	< 500	D	µg/kg wet	500						
Acrylonitrile	< 50.0	D	µg/kg wet	50.0						
Benzene	< 50.0	D	µg/kg wet	50.0						
Bromobenzene	< 50.0	D	µg/kg wet	50.0						
Bromochloromethane	< 50.0	D	µg/kg wet	50.0						
Bromodichloromethane	< 50.0	D	µg/kg wet	50.0						
Bromoform	< 50.0	D	µg/kg wet	50.0						
Bromomethane	< 100	D	µg/kg wet	100						
2-Butanone (MEK)	< 100	D	µg/kg wet	100						
n-Butylbenzene	< 50.0	D	µg/kg wet	50.0						
sec-Butylbenzene	< 50.0	D	µg/kg wet	50.0						
tert-Butylbenzene	< 50.0	D	µg/kg wet	50.0						
Carbon disulfide	< 100	D	µg/kg wet	100						
Carbon tetrachloride	< 50.0	D	µg/kg wet	50.0						
Chlorobenzene	< 50.0	D	µg/kg wet	50.0						
Chloroethane	< 100	D	µg/kg wet	100						
Chloroform	< 50.0	D	µg/kg wet	50.0						
Chloromethane	< 100	D	µg/kg wet	100						
2-Chlorotoluene	< 50.0	D	µg/kg wet	50.0						
4-Chlorotoluene	< 50.0	D	µg/kg wet	50.0						
1,2-Dibromo-3-chloropropane	< 100	D	µg/kg wet	100						
Dibromochloromethane	< 50.0	D	µg/kg wet	50.0						
1,2-Dibromoethane (EDB)	< 50.0	D	µg/kg wet	50.0						
Dibromomethane	< 50.0	D	µg/kg wet	50.0						
1,2-Dichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,3-Dichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,4-Dichlorobenzene	< 50.0	D	µg/kg wet	50.0						
Dichlorodifluoromethane (Freon12)	< 100	D	µg/kg wet	100						
1,1-Dichloroethane	< 50.0	D	µg/kg wet	50.0						
1,2-Dichloroethane	< 50.0	D	µg/kg wet	50.0						
1,1-Dichloroethene	< 50.0	D	µg/kg wet	50.0						
cis-1,2-Dichloroethene	< 50.0	D	µg/kg wet	50.0						
trans-1,2-Dichloroethene	< 50.0	D	µg/kg wet	50.0						
1,2-Dichloropropane	< 50.0	D	µg/kg wet	50.0						
1,3-Dichloropropane	< 50.0	D	µg/kg wet	50.0						
2,2-Dichloropropane	< 50.0	D	µg/kg wet	50.0						

Volatile Organic Compounds - Quality Control

SW846 8260C

Batch 2002975 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2002975-BLK1)					Prepared & Analyzed: 23-Dec-20					
1,1-Dichloropropene	< 50.0	D	µg/kg wet	50.0						
cis-1,3-Dichloropropene	< 50.0	D	µg/kg wet	50.0						
trans-1,3-Dichloropropene	< 50.0	D	µg/kg wet	50.0						
Ethylbenzene	< 50.0	D	µg/kg wet	50.0						
Hexachlorobutadiene	< 50.0	D	µg/kg wet	50.0						
2-Hexanone (MBK)	< 100	D	µg/kg wet	100						
Isopropylbenzene	< 50.0	D	µg/kg wet	50.0						
4-Isopropyltoluene	< 50.0	D	µg/kg wet	50.0						
Methyl tert-butyl ether	< 50.0	D	µg/kg wet	50.0						
4-Methyl-2-pentanone (MIBK)	< 100	D	µg/kg wet	100						
Methylene chloride	< 100	D	µg/kg wet	100						
Naphthalene	< 50.0	D	µg/kg wet	50.0						
n-Propylbenzene	< 50.0	D	µg/kg wet	50.0						
Styrene	< 50.0	D	µg/kg wet	50.0						
1,1,1,2-Tetrachloroethane	< 50.0	D	µg/kg wet	50.0						
1,1,2,2-Tetrachloroethane	< 50.0	D	µg/kg wet	50.0						
Tetrachloroethene	< 50.0	D	µg/kg wet	50.0						
Toluene	< 50.0	D	µg/kg wet	50.0						
1,2,3-Trichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,2,4-Trichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,3,5-Trichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,1,1-Trichloroethane	< 50.0	D	µg/kg wet	50.0						
1,1,2-Trichloroethane	< 50.0	D	µg/kg wet	50.0						
Trichloroethene	< 50.0	D	µg/kg wet	50.0						
Trichlorofluoromethane (Freon 11)	< 50.0	D	µg/kg wet	50.0						
1,2,3-Trichloropropane	< 50.0	D	µg/kg wet	50.0						
1,2,4-Trimethylbenzene	< 50.0	D	µg/kg wet	50.0						
1,3,5-Trimethylbenzene	< 50.0	D	µg/kg wet	50.0						
Vinyl chloride	< 50.0	D	µg/kg wet	50.0						
m,p-Xylene	< 100	D	µg/kg wet	100						
o-Xylene	< 50.0	D	µg/kg wet	50.0						
Tetrahydrofuran	< 100	D	µg/kg wet	100						
Ethyl ether	< 50.0	D	µg/kg wet	50.0						
Tert-amyl methyl ether	< 50.0	D	µg/kg wet	50.0						
Ethyl tert-butyl ether	< 50.0	D	µg/kg wet	50.0						
Di-isopropyl ether	< 50.0	D	µg/kg wet	50.0						
Tert-Butanol / butyl alcohol	< 1000	D	µg/kg wet	1000						
1,4-Dioxane	< 1000	D	µg/kg wet	1000						
trans-1,4-Dichloro-2-butene	< 250	D	µg/kg wet	250						
Ethanol	< 10000	D	µg/kg wet	10000						
Surrogate: 4-Bromofluorobenzene	*47.9*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*50.9*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.5*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*50.3*		µg/l		*50.0*		*101*	*70-130*		
LCS (2002975-BS1)					Prepared & Analyzed: 23-Dec-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**21.0**	D	µg/l		20.0		105	70-130		
Acetone	**15.7**	D	µg/l		20.0		78	70-130		
Acrylonitrile	**21.5**	D	µg/l		20.0		108	70-130		
Benzene	**18.7**	D	µg/l		20.0		94	70-130		
Bromobenzene	**17.3**	D	µg/l		20.0		87	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002975 - SW846 5035A Soil (high level)										
LCS (2002975-BS1)					Prepared & Analyzed: 23-Dec-20					
Bromochloromethane	**19.2**	D	µg/l		20.0		96	70-130		
Bromodichloromethane	**20.6**	D	µg/l		20.0		103	70-130		
Bromoform	**19.3**	D	µg/l		20.0		96	70-130		
Bromomethane	**17.5**	D	µg/l		20.0		88	70-130		
2-Butanone (MEK)	**14.2**	D	µg/l		20.0		71	70-130		
n-Butylbenzene	**21.3**	D	µg/l		20.0		106	70-130		
sec-Butylbenzene	**17.6**	D	µg/l		20.0		88	70-130		
tert-Butylbenzene	**16.8**	D	µg/l		20.0		84	70-130		
Carbon disulfide	**17.7**	D	µg/l		20.0		89	70-130		
Carbon tetrachloride	**19.1**	D	µg/l		20.0		96	70-130		
Chlorobenzene	**18.4**	D	µg/l		20.0		92	70-130		
Chloroethane	**15.8**	D	µg/l		20.0		79	70-130		
Chloroform	**18.7**	D	µg/l		20.0		94	70-130		
Chloromethane	**17.6**	D	µg/l		20.0		88	70-130		
2-Chlorotoluene	**18.7**	D	µg/l		20.0		94	70-130		
4-Chlorotoluene	**19.5**	D	µg/l		20.0		98	70-130		
1,2-Dibromo-3-chloropropane	**18.6**	D	µg/l		20.0		93	70-130		
Dibromochloromethane	**18.5**	D	µg/l		20.0		93	70-130		
1,2-Dibromoethane (EDB)	**18.7**	D	µg/l		20.0		94	70-130		
Dibromomethane	**20.0**	D	µg/l		20.0		100	70-130		
1,2-Dichlorobenzene	**18.5**	D	µg/l		20.0		93	70-130		
1,3-Dichlorobenzene	**18.7**	D	µg/l		20.0		94	70-130		
1,4-Dichlorobenzene	**17.8**	D	µg/l		20.0		89	70-130		
Dichlorodifluoromethane (Freon12)	**17.0**	D	µg/l		20.0		85	70-130		
1,1-Dichloroethane	**19.6**	D	µg/l		20.0		98	70-130		
1,2-Dichloroethane	**19.7**	D	µg/l		20.0		99	70-130		
1,1-Dichloroethene	**18.9**	D	µg/l		20.0		94	70-130		
cis-1,2-Dichloroethene	**18.4**	D	µg/l		20.0		92	70-130		
trans-1,2-Dichloroethene	**18.8**	D	µg/l		20.0		94	70-130		
1,2-Dichloropropane	**19.1**	D	µg/l		20.0		96	70-130		
1,3-Dichloropropane	**18.5**	D	µg/l		20.0		92	70-130		
2,2-Dichloropropane	**21.0**	D	µg/l		20.0		105	70-130		
1,1-Dichloropropene	**18.8**	D	µg/l		20.0		94	70-130		
cis-1,3-Dichloropropene	**16.6**	D	µg/l		20.0		83	70-130		
trans-1,3-Dichloropropene	**18.8**	D	µg/l		20.0		94	70-130		
Ethylbenzene	**19.0**	D	µg/l		20.0		95	70-130		
Hexachlorobutadiene	**17.6**	D	µg/l		20.0		88	70-130		
2-Hexanone (MBK)	**14.9**	D	µg/l		20.0		75	70-130		
Isopropylbenzene	**18.7**	D	µg/l		20.0		93	70-130		
4-Isopropyltoluene	**16.8**	D	µg/l		20.0		84	70-130		
Methyl tert-butyl ether	**17.3**	D	µg/l		20.0		87	70-130		
4-Methyl-2-pentanone (MIBK)	**17.2**	D	µg/l		20.0		86	70-130		
Methylene chloride	**18.2**	D	µg/l		20.0		91	70-130		
Naphthalene	**15.7**	D	µg/l		20.0		79	70-130		
n-Propylbenzene	**19.3**	D	µg/l		20.0		97	70-130		
Styrene	**18.4**	D	µg/l		20.0		92	70-130		
1,1,1,2-Tetrachloroethane	**17.9**	D	µg/l		20.0		89	70-130		
1,1,2,2-Tetrachloroethane	**17.8**	D	µg/l		20.0		89	70-130		
Tetrachloroethene	**17.9**	D	µg/l		20.0		90	70-130		
Toluene	**19.3**	D	µg/l		20.0		97	70-130		

SW846 8260C

Batch 2002975 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (2002975-BS1)					Prepared & Analyzed: 23-Dec-20					
1,2,3-Trichlorobenzene	**17.6**	D	µg/l		20.0		88	70-130		
1,2,4-Trichlorobenzene	**16.7**	D	µg/l		20.0		83	70-130		
1,3,5-Trichlorobenzene	**17.9**	D	µg/l		20.0		90	70-130		
1,1,1-Trichloroethane	**20.6**	D	µg/l		20.0		103	70-130		
1,1,2-Trichloroethane	**19.6**	D	µg/l		20.0		98	70-130		
Trichloroethene	**19.8**	D	µg/l		20.0		99	70-130		
Trichlorofluoromethane (Freon 11)	**20.8**	D	µg/l		20.0		104	70-130		
1,2,3-Trichloropropane	**18.6**	D	µg/l		20.0		93	70-130		
1,2,4-Trimethylbenzene	**20.1**	D	µg/l		20.0		101	70-130		
1,3,5-Trimethylbenzene	**20.2**	D	µg/l		20.0		101	70-130		
Vinyl chloride	**19.0**	D	µg/l		20.0		95	70-130		
m,p-Xylene	**41.0**	D	µg/l		40.0		102	70-130		
o-Xylene	**18.3**	D	µg/l		20.0		92	70-130		
Tetrahydrofuran	**17.2**	D	µg/l		20.0		86	70-130		
Ethyl ether	**18.9**	D	µg/l		20.0		94	70-130		
Tert-amyl methyl ether	**19.5**	D	µg/l		20.0		97	70-130		
Ethyl tert-butyl ether	**19.0**	D	µg/l		20.0		95	70-130		
Di-isopropyl ether	**19.3**	D	µg/l		20.0		97	70-130		
Tert-Butanol / butyl alcohol	**195**	D	µg/l		200		97	70-130		
1,4-Dioxane	**177**	D	µg/l		200		89	70-130		
trans-1,4-Dichloro-2-butene	**19.4**	D	µg/l		20.0		97	70-130		
Ethanol	**389**	D	µg/l		400		97	70-130		
Surrogate: 4-Bromofluorobenzene	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.7*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.9*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*50.7*		µg/l		*50.0*		*101*	*70-130*		
LCS Dup (2002975-BSD1)					Prepared & Analyzed: 23-Dec-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**20.3**	D	µg/l		20.0		101	70-130	4	30
Acetone	**15.2**	D	µg/l		20.0		76	70-130	3	30
Acrylonitrile	**20.8**	D	µg/l		20.0		104	70-130	3	30
Benzene	**18.3**	D	µg/l		20.0		92	70-130	2	30
Bromobenzene	**18.5**	D	µg/l		20.0		93	70-130	7	30
Bromochloromethane	**19.2**	D	µg/l		20.0		96	70-130	0.4	30
Bromodichloromethane	**19.6**	D	µg/l		20.0		98	70-130	5	30
Bromoform	**19.4**	D	µg/l		20.0		97	70-130	0.6	30
Bromomethane	**19.0**	D	µg/l		20.0		95	70-130	8	30
2-Butanone (MEK)	**14.2**	D	µg/l		20.0		71	70-130	0.07	30
n-Butylbenzene	**20.9**	D	µg/l		20.0		105	70-130	2	30
sec-Butylbenzene	**17.6**	D	µg/l		20.0		88	70-130	0.06	30
tert-Butylbenzene	**16.7**	D	µg/l		20.0		84	70-130	0.5	30
Carbon disulfide	**17.4**	D	µg/l		20.0		87	70-130	2	30
Carbon tetrachloride	**18.8**	D	µg/l		20.0		94	70-130	2	30
Chlorobenzene	**18.4**	D	µg/l		20.0		92	70-130	0.05	30
Chloroethane	**20.4**	D	µg/l		20.0		102	70-130	25	30
Chloroform	**18.6**	D	µg/l		20.0		93	70-130	0.4	30
Chloromethane	**17.3**	D	µg/l		20.0		87	70-130	1	30
2-Chlorotoluene	**18.7**	D	µg/l		20.0		94	70-130	0	30
4-Chlorotoluene	**19.0**	D	µg/l		20.0		95	70-130	2	30
1,2-Dibromo-3-chloropropane	**19.5**	D	µg/l		20.0		97	70-130	5	30
Dibromochloromethane	**18.7**	D	µg/l		20.0		94	70-130	1	30

Volatile Organic Compounds - Quality Control

SW846 8260C

Batch 2002975 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (2002975-BSD1)					Prepared & Analyzed: 23-Dec-20					
1,2-Dibromoethane (EDB)	**19.0**	D	µg/l		20.0		95	70-130	2	30
Dibromomethane	**19.6**	D	µg/l		20.0		98	70-130	2	30
1,2-Dichlorobenzene	**18.2**	D	µg/l		20.0		91	70-130	2	30
1,3-Dichlorobenzene	**18.7**	D	µg/l		20.0		94	70-130	0	30
1,4-Dichlorobenzene	**17.8**	D	µg/l		20.0		89	70-130	0.2	30
Dichlorodifluoromethane (Freon12)	**17.4**	D	µg/l		20.0		87	70-130	2	30
1,1-Dichloroethane	**19.1**	D	µg/l		20.0		96	70-130	3	30
1,2-Dichloroethane	**19.5**	D	µg/l		20.0		97	70-130	1	30
1,1-Dichloroethene	**18.7**	D	µg/l		20.0		94	70-130	0.7	30
cis-1,2-Dichloroethene	**18.6**	D	µg/l		20.0		93	70-130	1	30
trans-1,2-Dichloroethene	**18.7**	D	µg/l		20.0		93	70-130	0.8	30
1,2-Dichloropropane	**19.5**	D	µg/l		20.0		98	70-130	2	30
1,3-Dichloropropane	**19.2**	D	µg/l		20.0		96	70-130	4	30
2,2-Dichloropropane	**20.3**	D	µg/l		20.0		102	70-130	4	30
1,1-Dichloropropene	**18.8**	D	µg/l		20.0		94	70-130	0.2	30
cis-1,3-Dichloropropene	**16.4**	D	µg/l		20.0		82	70-130	0.9	30
trans-1,3-Dichloropropene	**18.8**	D	µg/l		20.0		94	70-130	0.2	30
Ethylbenzene	**17.9**	D	µg/l		20.0		90	70-130	6	30
Hexachlorobutadiene	**16.6**	D	µg/l		20.0		83	70-130	6	30
2-Hexanone (MBK)	**15.6**	D	µg/l		20.0		78	70-130	5	30
Isopropylbenzene	**19.0**	D	µg/l		20.0		95	70-130	2	30
4-Isopropyltoluene	**16.4**	D	µg/l		20.0		82	70-130	2	30
Methyl tert-butyl ether	**18.2**	D	µg/l		20.0		91	70-130	5	30
4-Methyl-2-pentanone (MIBK)	**18.6**	D	µg/l		20.0		93	70-130	8	30
Methylene chloride	**18.2**	D	µg/l		20.0		91	70-130	0	30
Naphthalene	**17.0**	D	µg/l		20.0		85	70-130	8	30
n-Propylbenzene	**19.4**	D	µg/l		20.0		97	70-130	0.7	30
Styrene	**18.5**	D	µg/l		20.0		93	70-130	0.5	30
1,1,1,2-Tetrachloroethane	**17.9**	D	µg/l		20.0		90	70-130	0.2	30
1,1,2,2-Tetrachloroethane	**17.6**	D	µg/l		20.0		88	70-130	1	30
Tetrachloroethene	**18.0**	D	µg/l		20.0		90	70-130	0.5	30
Toluene	**19.3**	D	µg/l		20.0		97	70-130	0	30
1,2,3-Trichlorobenzene	**17.2**	D	µg/l		20.0		86	70-130	2	30
1,2,4-Trichlorobenzene	**16.4**	D	µg/l		20.0		82	70-130	2	30
1,3,5-Trichlorobenzene	**17.4**	D	µg/l		20.0		87	70-130	3	30
1,1,1-Trichloroethane	**19.7**	D	µg/l		20.0		98	70-130	4	30
1,1,2-Trichloroethane	**19.9**	D	µg/l		20.0		100	70-130	2	30
Trichloroethene	**19.0**	D	µg/l		20.0		95	70-130	5	30
Trichlorofluoromethane (Freon 11)	**20.7**	D	µg/l		20.0		104	70-130	0.6	30
1,2,3-Trichloropropane	**18.1**	D	µg/l		20.0		91	70-130	3	30
1,2,4-Trimethylbenzene	**19.9**	D	µg/l		20.0		99	70-130	1	30
1,3,5-Trimethylbenzene	**20.2**	D	µg/l		20.0		101	70-130	0.3	30
Vinyl chloride	**18.8**	D	µg/l		20.0		94	70-130	1	30
m,p-Xylene	**40.4**	D	µg/l		40.0		101	70-130	2	30
o-Xylene	**18.4**	D	µg/l		20.0		92	70-130	0.4	30
Tetrahydrofuran	**20.2**	D	µg/l		20.0		101	70-130	16	30
Ethyl ether	**19.5**	D	µg/l		20.0		98	70-130	3	30
Tert-amyl methyl ether	**20.1**	D	µg/l		20.0		100	70-130	3	30
Ethyl tert-butyl ether	**19.2**	D	µg/l		20.0		96	70-130	0.8	30
Di-isopropyl ether	**19.7**	D	µg/l		20.0		98	70-130	2	30

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002975 - SW846 5035A Soil (high level)										
LCS Dup (2002975-BSD1)					Prepared & Analyzed: 23-Dec-20					
Tert-Butanol / butyl alcohol	**198**	D	µg/l		200		99	70-130	1	30
1,4-Dioxane	**180**	D	µg/l		200		90	70-130	2	30
trans-1,4-Dichloro-2-butene	**20.9**	D	µg/l		20.0		105	70-130	8	30
Ethanol	**385**	D	µg/l		400		96	70-130	1	30
Surrogate: 4-Bromofluorobenzene	*50.5*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*50.8*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.3*		µg/l		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Batch 2002995 - SW846 5035A Soil (high level)										
Blank (2002995-BLK1)					Prepared & Analyzed: 24-Dec-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	D	µg/kg wet	50.0						
Acetone	< 500	D	µg/kg wet	500						
Acrylonitrile	< 50.0	D	µg/kg wet	50.0						
Benzene	< 50.0	D	µg/kg wet	50.0						
Bromobenzene	< 50.0	D	µg/kg wet	50.0						
Bromochloromethane	< 50.0	D	µg/kg wet	50.0						
Bromodichloromethane	< 50.0	D	µg/kg wet	50.0						
Bromoform	< 50.0	D	µg/kg wet	50.0						
Bromomethane	< 100	D	µg/kg wet	100						
2-Butanone (MEK)	< 100	D	µg/kg wet	100						
n-Butylbenzene	< 50.0	D	µg/kg wet	50.0						
sec-Butylbenzene	< 50.0	D	µg/kg wet	50.0						
tert-Butylbenzene	< 50.0	D	µg/kg wet	50.0						
Carbon disulfide	< 100	D	µg/kg wet	100						
Carbon tetrachloride	< 50.0	D	µg/kg wet	50.0						
Chlorobenzene	< 50.0	D	µg/kg wet	50.0						
Chloroethane	< 100	D	µg/kg wet	100						
Chloroform	< 50.0	D	µg/kg wet	50.0						
Chloromethane	< 100	D	µg/kg wet	100						
2-Chlorotoluene	< 50.0	D	µg/kg wet	50.0						
4-Chlorotoluene	< 50.0	D	µg/kg wet	50.0						
1,2-Dibromo-3-chloropropane	< 100	D	µg/kg wet	100						
Dibromochloromethane	< 50.0	D	µg/kg wet	50.0						
1,2-Dibromoethane (EDB)	< 50.0	D	µg/kg wet	50.0						
Dibromomethane	< 50.0	D	µg/kg wet	50.0						
1,2-Dichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,3-Dichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,4-Dichlorobenzene	< 50.0	D	µg/kg wet	50.0						
Dichlorodifluoromethane (Freon12)	< 100	D	µg/kg wet	100						
1,1-Dichloroethane	< 50.0	D	µg/kg wet	50.0						
1,2-Dichloroethane	< 50.0	D	µg/kg wet	50.0						
1,1-Dichloroethene	< 50.0	D	µg/kg wet	50.0						
cis-1,2-Dichloroethene	< 50.0	D	µg/kg wet	50.0						
trans-1,2-Dichloroethene	< 50.0	D	µg/kg wet	50.0						
1,2-Dichloropropane	< 50.0	D	µg/kg wet	50.0						
1,3-Dichloropropane	< 50.0	D	µg/kg wet	50.0						
2,2-Dichloropropane	< 50.0	D	µg/kg wet	50.0						
1,1-Dichloropropene	< 50.0	D	µg/kg wet	50.0						
cis-1,3-Dichloropropene	< 50.0	D	µg/kg wet	50.0						
trans-1,3-Dichloropropene	< 50.0	D	µg/kg wet	50.0						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002995 - SW846 5035A Soil (high level)										
Blank (2002995-BLK1)					Prepared & Analyzed: 24-Dec-20					
Ethylbenzene	< 50.0	D	µg/kg wet	50.0						
Hexachlorobutadiene	< 50.0	D	µg/kg wet	50.0						
2-Hexanone (MBK)	< 100	D	µg/kg wet	100						
Isopropylbenzene	< 50.0	D	µg/kg wet	50.0						
4-Isopropyltoluene	< 50.0	D	µg/kg wet	50.0						
Methyl tert-butyl ether	< 50.0	D	µg/kg wet	50.0						
4-Methyl-2-pentanone (MIBK)	< 100	D	µg/kg wet	100						
Methylene chloride	< 100	D	µg/kg wet	100						
Naphthalene	< 50.0	D	µg/kg wet	50.0						
n-Propylbenzene	< 50.0	D	µg/kg wet	50.0						
Styrene	< 50.0	D	µg/kg wet	50.0						
1,1,1,2-Tetrachloroethane	< 50.0	D	µg/kg wet	50.0						
1,1,2,2-Tetrachloroethane	< 50.0	D	µg/kg wet	50.0						
Tetrachloroethene	< 50.0	D	µg/kg wet	50.0						
Toluene	< 50.0	D	µg/kg wet	50.0						
1,2,3-Trichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,2,4-Trichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,3,5-Trichlorobenzene	< 50.0	D	µg/kg wet	50.0						
1,1,1-Trichloroethane	< 50.0	D	µg/kg wet	50.0						
1,1,2-Trichloroethane	< 50.0	D	µg/kg wet	50.0						
Trichloroethene	< 50.0	D	µg/kg wet	50.0						
Trichlorofluoromethane (Freon 11)	< 50.0	D	µg/kg wet	50.0						
1,2,3-Trichloropropane	< 50.0	D	µg/kg wet	50.0						
1,2,4-Trimethylbenzene	< 50.0	D	µg/kg wet	50.0						
1,3,5-Trimethylbenzene	< 50.0	D	µg/kg wet	50.0						
Vinyl chloride	< 50.0	D	µg/kg wet	50.0						
m,p-Xylene	< 100	D	µg/kg wet	100						
o-Xylene	< 50.0	D	µg/kg wet	50.0						
Tetrahydrofuran	< 100	D	µg/kg wet	100						
Ethyl ether	< 50.0	D	µg/kg wet	50.0						
Tert-amyl methyl ether	< 50.0	D	µg/kg wet	50.0						
Ethyl tert-butyl ether	< 50.0	D	µg/kg wet	50.0						
Di-isopropyl ether	< 50.0	D	µg/kg wet	50.0						
Tert-Butanol / butyl alcohol	< 1000	D	µg/kg wet	1000						
1,4-Dioxane	< 1000	D	µg/kg wet	1000						
trans-1,4-Dichloro-2-butene	< 250	D	µg/kg wet	250						
Ethanol	< 10000	D	µg/kg wet	10000						
Surrogate: 4-Bromofluorobenzene	*47.9*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.4*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*50.4*		µg/l		*50.0*		*101*	*70-130*		
LCS (2002995-BS1)					Prepared & Analyzed: 24-Dec-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**22.0**	D	µg/l		20.0		110	70-130		
Acetone	**16.8**	D	µg/l		20.0		84	70-130		
Acrylonitrile	**22.4**	D	µg/l		20.0		112	70-130		
Benzene	**19.8**	D	µg/l		20.0		99	70-130		
Bromobenzene	**18.7**	D	µg/l		20.0		94	70-130		
Bromochloromethane	**21.2**	D	µg/l		20.0		106	70-130		
Bromodichloromethane	**22.7**	D	µg/l		20.0		113	70-130		
Bromoform	**21.2**	D	µg/l		20.0		106	70-130		

Volatile Organic Compounds - Quality Control

SW846 8260C

Batch 2002995 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (2002995-BS1)					Prepared & Analyzed: 24-Dec-20					
Bromomethane	**19.3**	D	µg/l		20.0		97	70-130		
2-Butanone (MEK)	**14.1**	D	µg/l		20.0		70	70-130		
n-Butylbenzene	**21.8**	D	µg/l		20.0		109	70-130		
sec-Butylbenzene	**18.5**	D	µg/l		20.0		93	70-130		
tert-Butylbenzene	**17.6**	D	µg/l		20.0		88	70-130		
Carbon disulfide	**18.9**	D	µg/l		20.0		95	70-130		
Carbon tetrachloride	**21.0**	D	µg/l		20.0		105	70-130		
Chlorobenzene	**19.2**	D	µg/l		20.0		96	70-130		
Chloroethane	**16.9**	D	µg/l		20.0		84	70-130		
Chloroform	**20.1**	D	µg/l		20.0		100	70-130		
Chloromethane	**19.1**	D	µg/l		20.0		95	70-130		
2-Chlorotoluene	**19.6**	D	µg/l		20.0		98	70-130		
4-Chlorotoluene	**20.0**	D	µg/l		20.0		100	70-130		
1,2-Dibromo-3-chloropropane	**20.2**	D	µg/l		20.0		101	70-130		
Dibromochloromethane	**20.0**	D	µg/l		20.0		100	70-130		
1,2-Dibromoethane (EDB)	**20.8**	D	µg/l		20.0		104	70-130		
Dibromomethane	**22.3**	D	µg/l		20.0		111	70-130		
1,2-Dichlorobenzene	**19.3**	D	µg/l		20.0		96	70-130		
1,3-Dichlorobenzene	**19.5**	D	µg/l		20.0		97	70-130		
1,4-Dichlorobenzene	**18.1**	D	µg/l		20.0		91	70-130		
Dichlorodifluoromethane (Freon12)	**18.5**	D	µg/l		20.0		92	70-130		
1,1-Dichloroethane	**21.2**	D	µg/l		20.0		106	70-130		
1,2-Dichloroethane	**21.3**	D	µg/l		20.0		106	70-130		
1,1-Dichloroethene	**20.6**	D	µg/l		20.0		103	70-130		
cis-1,2-Dichloroethene	**20.8**	D	µg/l		20.0		104	70-130		
trans-1,2-Dichloroethene	**20.2**	D	µg/l		20.0		101	70-130		
1,2-Dichloropropane	**20.9**	D	µg/l		20.0		104	70-130		
1,3-Dichloropropane	**20.4**	D	µg/l		20.0		102	70-130		
2,2-Dichloropropane	**22.1**	D	µg/l		20.0		110	70-130		
1,1-Dichloropropene	**20.6**	D	µg/l		20.0		103	70-130		
cis-1,3-Dichloropropene	**18.8**	D	µg/l		20.0		94	70-130		
trans-1,3-Dichloropropene	**20.8**	D	µg/l		20.0		104	70-130		
Ethylbenzene	**19.6**	D	µg/l		20.0		98	70-130		
Hexachlorobutadiene	**17.4**	D	µg/l		20.0		87	70-130		
2-Hexanone (MBK)	**17.4**	D	µg/l		20.0		87	70-130		
Isopropylbenzene	**19.6**	D	µg/l		20.0		98	70-130		
4-Isopropyltoluene	**17.2**	D	µg/l		20.0		86	70-130		
Methyl tert-butyl ether	**19.6**	D	µg/l		20.0		98	70-130		
4-Methyl-2-pentanone (MIBK)	**20.5**	D	µg/l		20.0		102	70-130		
Methylene chloride	**20.6**	D	µg/l		20.0		103	70-130		
Naphthalene	**18.7**	D	µg/l		20.0		94	70-130		
n-Propylbenzene	**19.8**	D	µg/l		20.0		99	70-130		
Styrene	**19.0**	D	µg/l		20.0		95	70-130		
1,1,1,2-Tetrachloroethane	**19.2**	D	µg/l		20.0		96	70-130		
1,1,2,2-Tetrachloroethane	**18.1**	D	µg/l		20.0		91	70-130		
Tetrachloroethene	**19.4**	D	µg/l		20.0		97	70-130		
Toluene	**20.5**	D	µg/l		20.0		103	70-130		
1,2,3-Trichlorobenzene	**18.5**	D	µg/l		20.0		92	70-130		
1,2,4-Trichlorobenzene	**18.6**	D	µg/l		20.0		93	70-130		
1,3,5-Trichlorobenzene	**19.1**	D	µg/l		20.0		95	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

SW846 8260C

Batch 2002995 - SW846 5035A Soil (high level)

LCS (2002995-BS1) Prepared & Analyzed: 24-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1,1-Trichloroethane	**20.9**	D	µg/l		20.0		104	70-130		
1,1,2-Trichloroethane	**20.6**	D	µg/l		20.0		103	70-130		
Trichloroethene	**20.4**	D	µg/l		20.0		102	70-130		
Trichlorofluoromethane (Freon 11)	**22.4**	D	µg/l		20.0		112	70-130		
1,2,3-Trichloropropane	**18.7**	D	µg/l		20.0		94	70-130		
1,2,4-Trimethylbenzene	**21.0**	D	µg/l		20.0		105	70-130		
1,3,5-Trimethylbenzene	**21.1**	D	µg/l		20.0		105	70-130		
Vinyl chloride	**20.2**	D	µg/l		20.0		101	70-130		
m,p-Xylene	**42.4**	D	µg/l		40.0		106	70-130		
o-Xylene	**19.9**	D	µg/l		20.0		100	70-130		
Tetrahydrofuran	**21.6**	D	µg/l		20.0		108	70-130		
Ethyl ether	**19.8**	D	µg/l		20.0		99	70-130		
Tert-amyl methyl ether	**21.9**	D	µg/l		20.0		109	70-130		
Ethyl tert-butyl ether	**21.5**	D	µg/l		20.0		108	70-130		
Di-isopropyl ether	**21.4**	D	µg/l		20.0		107	70-130		
Tert-Butanol / butyl alcohol	**220**	D	µg/l		200		110	70-130		
1,4-Dioxane	**204**	D	µg/l		200		102	70-130		
trans-1,4-Dichloro-2-butene	**20.9**	D	µg/l		20.0		105	70-130		
Ethanol	**393**	D	µg/l		400		98	70-130		
Surrogate: 4-Bromofluorobenzene	*50.5*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*51.6*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.2*		µg/l		*50.0*		*106*	*70-130*		
Surrogate: Dibromofluoromethane	*52.7*		µg/l		*50.0*		*105*	*70-130*		

LCS Dup (2002995-BSD1) Prepared & Analyzed: 24-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	**21.2**	D	µg/l		20.0		106	70-130	4	30
Acetone	**15.2**	D	µg/l		20.0		76	70-130	10	30
Acrylonitrile	**20.9**	D	µg/l		20.0		104	70-130	7	30
Benzene	**19.0**	D	µg/l		20.0		95	70-130	4	30
Bromobenzene	**18.1**	D	µg/l		20.0		90	70-130	3	30
Bromochloromethane	**20.7**	D	µg/l		20.0		104	70-130	2	30
Bromodichloromethane	**20.3**	D	µg/l		20.0		102	70-130	11	30
Bromoform	**20.1**	D	µg/l		20.0		101	70-130	5	30
Bromomethane	**18.4**	D	µg/l		20.0		92	70-130	5	30
2-Butanone (MEK)	**14.1**	D	µg/l		20.0		71	70-130	0.2	30
n-Butylbenzene	**21.6**	D	µg/l		20.0		108	70-130	0.9	30
sec-Butylbenzene	**18.2**	D	µg/l		20.0		91	70-130	2	30
tert-Butylbenzene	**17.8**	D	µg/l		20.0		89	70-130	0.9	30
Carbon disulfide	**17.5**	D	µg/l		20.0		87	70-130	8	30
Carbon tetrachloride	**19.8**	D	µg/l		20.0		99	70-130	6	30
Chlorobenzene	**18.7**	D	µg/l		20.0		94	70-130	3	30
Chloroethane	**18.4**	D	µg/l		20.0		92	70-130	9	30
Chloroform	**19.0**	D	µg/l		20.0		95	70-130	6	30
Chloromethane	**18.7**	D	µg/l		20.0		93	70-130	2	30
2-Chlorotoluene	**19.4**	D	µg/l		20.0		97	70-130	0.9	30
4-Chlorotoluene	**20.2**	D	µg/l		20.0		101	70-130	1	30
1,2-Dibromo-3-chloropropane	**18.7**	D	µg/l		20.0		94	70-130	8	30
Dibromochloromethane	**19.2**	D	µg/l		20.0		96	70-130	4	30
1,2-Dibromoethane (EDB)	**19.6**	D	µg/l		20.0		98	70-130	6	30
Dibromomethane	**20.3**	D	µg/l		20.0		102	70-130	9	30
1,2-Dichlorobenzene	**18.0**	D	µg/l		20.0		90	70-130	7	30

Volatile Organic Compounds - Quality Control

SW846 8260C

Batch 2002995 - SW846 5035A Soil (high level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (2002995-BSD1)					Prepared & Analyzed: 24-Dec-20					
1,3-Dichlorobenzene	**19.1**	D	µg/l		20.0		96	70-130	2	30
1,4-Dichlorobenzene	**17.7**	D	µg/l		20.0		89	70-130	2	30
Dichlorodifluoromethane (Freon12)	**17.6**	D	µg/l		20.0		88	70-130	5	30
1,1-Dichloroethane	**19.4**	D	µg/l		20.0		97	70-130	9	30
1,2-Dichloroethane	**20.2**	D	µg/l		20.0		101	70-130	5	30
1,1-Dichloroethene	**19.5**	D	µg/l		20.0		98	70-130	5	30
cis-1,2-Dichloroethene	**19.6**	D	µg/l		20.0		98	70-130	6	30
trans-1,2-Dichloroethene	**19.3**	D	µg/l		20.0		96	70-130	5	30
1,2-Dichloropropane	**20.1**	D	µg/l		20.0		101	70-130	4	30
1,3-Dichloropropane	**19.2**	D	µg/l		20.0		96	70-130	6	30
2,2-Dichloropropane	**20.8**	D	µg/l		20.0		104	70-130	6	30
1,1-Dichloropropene	**19.3**	D	µg/l		20.0		97	70-130	6	30
cis-1,3-Dichloropropene	**18.0**	D	µg/l		20.0		90	70-130	4	30
trans-1,3-Dichloropropene	**19.3**	D	µg/l		20.0		97	70-130	8	30
Ethylbenzene	**18.6**	D	µg/l		20.0		93	70-130	5	30
Hexachlorobutadiene	**17.1**	D	µg/l		20.0		86	70-130	2	30
2-Hexanone (MBK)	**14.9**	D	µg/l		20.0		74	70-130	15	30
Isopropylbenzene	**19.6**	D	µg/l		20.0		98	70-130	0.3	30
4-Isopropyltoluene	**16.7**	D	µg/l		20.0		84	70-130	3	30
Methyl tert-butyl ether	**18.2**	D	µg/l		20.0		91	70-130	8	30
4-Methyl-2-pentanone (MIBK)	**18.6**	D	µg/l		20.0		93	70-130	10	30
Methylene chloride	**18.9**	D	µg/l		20.0		95	70-130	8	30
Naphthalene	**18.9**	D	µg/l		20.0		94	70-130	1	30
n-Propylbenzene	**19.8**	D	µg/l		20.0		99	70-130	0.2	30
Styrene	**19.0**	D	µg/l		20.0		95	70-130	0	30
1,1,1,2-Tetrachloroethane	**18.4**	D	µg/l		20.0		92	70-130	4	30
1,1,2,2-Tetrachloroethane	**18.2**	D	µg/l		20.0		91	70-130	0.4	30
Tetrachloroethene	**18.2**	D	µg/l		20.0		91	70-130	6	30
Toluene	**19.2**	D	µg/l		20.0		96	70-130	7	30
1,2,3-Trichlorobenzene	**18.7**	D	µg/l		20.0		93	70-130	1	30
1,2,4-Trichlorobenzene	**17.6**	D	µg/l		20.0		88	70-130	5	30
1,3,5-Trichlorobenzene	**17.8**	D	µg/l		20.0		89	70-130	7	30
1,1,1-Trichloroethane	**20.2**	D	µg/l		20.0		101	70-130	3	30
1,1,2-Trichloroethane	**19.6**	D	µg/l		20.0		98	70-130	5	30
Trichloroethene	**19.5**	D	µg/l		20.0		98	70-130	4	30
Trichlorofluoromethane (Freon 11)	**21.0**	D	µg/l		20.0		105	70-130	6	30
1,2,3-Trichloropropane	**18.1**	D	µg/l		20.0		91	70-130	3	30
1,2,4-Trimethylbenzene	**21.0**	D	µg/l		20.0		105	70-130	0.1	30
1,3,5-Trimethylbenzene	**21.0**	D	µg/l		20.0		105	70-130	0.4	30
Vinyl chloride	**18.9**	D	µg/l		20.0		95	70-130	7	30
m,p-Xylene	**42.4**	D	µg/l		40.0		106	70-130	0.2	30
o-Xylene	**19.4**	D	µg/l		20.0		97	70-130	3	30
Tetrahydrofuran	**19.7**	D	µg/l		20.0		99	70-130	9	30
Ethyl ether	**19.3**	D	µg/l		20.0		97	70-130	2	30
Tert-amyl methyl ether	**21.1**	D	µg/l		20.0		106	70-130	4	30
Ethyl tert-butyl ether	**20.6**	D	µg/l		20.0		103	70-130	4	30
Di-isopropyl ether	**20.2**	D	µg/l		20.0		101	70-130	6	30
Tert-Butanol / butyl alcohol	**210**	D	µg/l		200		105	70-130	5	30
1,4-Dioxane	**190**	D	µg/l		200		95	70-130	7	30
trans-1,4-Dichloro-2-butene	**19.6**	D	µg/l		20.0		98	70-130	6	30

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 2002995 - SW846 5035A Soil (high level)										
LCS Dup (2002995-BSD1)					Prepared & Analyzed: 24-Dec-20					
Ethanol	**371**	D	µg/l		400		93	70-130	6	30
Surrogate: 4-Bromofluorobenzene	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*50.3*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.3*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane	*50.7*		µg/l		*50.0*		*101*	*70-130*		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 1311/8270D										
Batch 2002978 - SW846 3510C										
Blank (2002978-BLK2)					Prepared & Analyzed: 23-Dec-20					
1,4-Dichlorobenzene	< 5.00		µg/l	5.00						
2,4-Dinitrotoluene	< 5.00		µg/l	5.00						
Hexachlorobenzene	< 5.00		µg/l	5.00						
Hexachlorobutadiene	< 5.00		µg/l	5.00						
Hexachloroethane	< 5.00		µg/l	5.00						
2-Methylphenol	< 5.00		µg/l	5.00						
3 & 4-Methylphenol	< 10.0		µg/l	10.0						
Nitrobenzene	< 5.00		µg/l	5.00						
Pentachlorophenol	< 20.0		µg/l	20.0						
Pyridine	< 5.00		µg/l	5.00						
2,4,5-Trichlorophenol	< 5.00		µg/l	5.00						
2,4,6-Trichlorophenol	< 5.00		µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	*37.6*		µg/l		*50.0*		*75*	*30-130*		
Surrogate: 2-Fluorophenol	*30.7*		µg/l		*50.0*		*61*	*15-110*		
Surrogate: Nitrobenzene-d5	*41.2*		µg/l		*50.0*		*82*	*30-130*		
Surrogate: Terphenyl-dl4	*50.4*		µg/l		*50.0*		*101*	*30-130*		
LCS (2002978-BS1)					Prepared & Analyzed: 23-Dec-20					
1,4-Dichlorobenzene	**41.2**		µg/l	5.00	50.0		82	40-140		
2,4-Dinitrotoluene	**52.2**		µg/l	5.00	50.0		104	40-140		
Hexachlorobenzene	**47.7**		µg/l	5.00	50.0		95	40-140		
Hexachlorobutadiene	**43.4**		µg/l	5.00	50.0		87	40-140		
Hexachloroethane	**46.8**		µg/l	5.00	50.0		94	40-140		
2-Methylphenol	**37.7**		µg/l	5.00	50.0		75	30-130		
3 & 4-Methylphenol	**36.7**		µg/l	10.0	50.0		73	30-130		
Nitrobenzene	**48.7**		µg/l	5.00	50.0		97	40-140		
Pentachlorophenol	**38.6**		µg/l	20.0	50.0		77	30-130		
Pyridine	**21.0**		µg/l	5.00	50.0		42	40-140		
2,4,5-Trichlorophenol	**39.7**		µg/l	5.00	50.0		79	30-130		
2,4,6-Trichlorophenol	**39.2**		µg/l	5.00	50.0		78	30-130		
Surrogate: 2-Fluorobiphenyl	*36.0*		µg/l		*50.0*		*72*	*30-130*		
Surrogate: 2-Fluorophenol	*27.6*		µg/l		*50.0*		*55*	*15-110*		
Surrogate: Nitrobenzene-d5	*42.2*		µg/l		*50.0*		*84*	*30-130*		
Surrogate: Terphenyl-dl4	*39.0*		µg/l		*50.0*		*78*	*30-130*		
LCS Dup (2002978-BSD1)					Prepared & Analyzed: 23-Dec-20					
1,4-Dichlorobenzene	**37.1**		µg/l	5.00	50.0		74	40-140	11	20
2,4-Dinitrotoluene	**47.8**		µg/l	5.00	50.0		96	40-140	9	20
Hexachlorobenzene	**48.9**		µg/l	5.00	50.0		98	40-140	3	20
Hexachlorobutadiene	**37.7**		µg/l	5.00	50.0		75	40-140	14	20
Hexachloroethane	**42.1**		µg/l	5.00	50.0		84	40-140	10	20
2-Methylphenol	**33.8**		µg/l	5.00	50.0		68	30-130	11	20
3 & 4-Methylphenol	**32.9**		µg/l	10.0	50.0		66	30-130	11	20
Nitrobenzene	**42.3**		µg/l	5.00	50.0		85	40-140	14	20
Pentachlorophenol	**38.7**		µg/l	20.0	50.0		77	30-130	0.3	20
Pyridine	**22.9**		µg/l	5.00	50.0		46	40-140	9	20
2,4,5-Trichlorophenol	**35.4**		µg/l	5.00	50.0		71	30-130	11	20
2,4,6-Trichlorophenol	**34.1**		µg/l	5.00	50.0		68	30-130	14	20
Surrogate: 2-Fluorobiphenyl	*31.7*		µg/l		*50.0*		*63*	*30-130*		
Surrogate: 2-Fluorophenol	*24.3*		µg/l		*50.0*		*49*	*15-110*		
Surrogate: Nitrobenzene-d5	*38.5*		µg/l		*50.0*		*77*	*30-130*		

Semivolatile Organic Compounds by GCMS - Quality Control

SW846 1311/8270D

Batch 2002978 - SW846 3510C

LCS Dup (2002978-BSD1) Prepared & Analyzed: 23-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: Terphenyl-dl4	*47.6*		µg/l		*50.0*		*95*	*30-130*		

SW846 8270D

Batch 2002981 - SW846 3546

Blank (2002981-BLK1) Prepared & Analyzed: 23-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	< 66.7		µg/kg wet	66.7						
Acenaphthylene	< 66.7		µg/kg wet	66.7						
Aniline	< 330		µg/kg wet	330						
Anthracene	< 66.7		µg/kg wet	66.7						
Azobenzene/Diphenyldiazene	< 330		µg/kg wet	330						
Benzidine	< 660		µg/kg wet	660						
Benzo (a) anthracene	< 66.7		µg/kg wet	66.7						
Benzo (a) pyrene	< 66.7		µg/kg wet	66.7						
Benzo (b) fluoranthene	< 66.7		µg/kg wet	66.7						
Benzo (g,h,i) perylene	< 66.7		µg/kg wet	66.7						
Benzo (k) fluoranthene	< 66.7		µg/kg wet	66.7						
Benzoic acid	< 330		µg/kg wet	330						
Benzyl alcohol	< 330		µg/kg wet	330						
Bis(2-chloroethoxy)methane	< 330		µg/kg wet	330						
Bis(2-chloroethyl)ether	< 167		µg/kg wet	167						
Bis(2-chloroisopropyl)ether	< 167		µg/kg wet	167						
Bis(2-ethylhexyl)phthalate	< 167		µg/kg wet	167						
4-Bromophenyl phenyl ether	< 330		µg/kg wet	330						
Butyl benzyl phthalate	< 330		µg/kg wet	330						
Carbazole	< 167		µg/kg wet	167						
4-Chloro-3-methylphenol	< 330		µg/kg wet	330						
4-Chloroaniline	< 167		µg/kg wet	167						
2-Chloronaphthalene	< 330		µg/kg wet	330						
2-Chlorophenol	< 167		µg/kg wet	167						
4-Chlorophenyl phenyl ether	< 330		µg/kg wet	330						
Chrysene	< 66.7		µg/kg wet	66.7						
Dibenzo (a,h) anthracene	< 66.7		µg/kg wet	66.7						
Dibenzofuran	< 167		µg/kg wet	167						
1,2-Dichlorobenzene	< 330		µg/kg wet	330						
1,3-Dichlorobenzene	< 330		µg/kg wet	330						
1,4-Dichlorobenzene	< 330		µg/kg wet	330						
3,3´-Dichlorobenzidine	< 330		µg/kg wet	330						
2,4-Dichlorophenol	< 167		µg/kg wet	167						
Diethyl phthalate	< 330		µg/kg wet	330						
Dimethyl phthalate	< 330		µg/kg wet	330						
2,4-Dimethylphenol	< 330		µg/kg wet	330						
Di-n-butyl phthalate	< 330		µg/kg wet	330						
4,6-Dinitro-2-methylphenol	< 330		µg/kg wet	330						
2,4-Dinitrophenol	< 330		µg/kg wet	330						
2,4-Dinitrotoluene	< 167		µg/kg wet	167						
2,6-Dinitrotoluene	< 167		µg/kg wet	167						
Di-n-octyl phthalate	< 330		µg/kg wet	330						
Fluoranthene	< 66.7		µg/kg wet	66.7						
Fluorene	< 66.7		µg/kg wet	66.7						
Hexachlorobenzene	< 167		µg/kg wet	167						
Hexachlorobutadiene	< 167		µg/kg wet	167						

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2002981 - SW846 3546										
Blank (2002981-BLK1)					Prepared & Analyzed: 23-Dec-20					
Hexachlorocyclopentadiene	< 167		µg/kg wet	167						
Hexachloroethane	< 167		µg/kg wet	167						
Indeno (1,2,3-cd) pyrene	< 66.7		µg/kg wet	66.7						
Isophorone	< 167		µg/kg wet	167						
2-Methylnaphthalene	< 66.7		µg/kg wet	66.7						
2-Methylphenol	< 330		µg/kg wet	330						
3 & 4-Methylphenol	< 330		µg/kg wet	330						
Naphthalene	< 66.7		µg/kg wet	66.7						
2-Nitroaniline	< 330		µg/kg wet	330						
3-Nitroaniline	< 330		µg/kg wet	330						
4-Nitroaniline	< 167		µg/kg wet	167						
Nitrobenzene	< 167		µg/kg wet	167						
2-Nitrophenol	< 167		µg/kg wet	167						
4-Nitrophenol	< 330		µg/kg wet	330						
N-Nitrosodimethylamine	< 167		µg/kg wet	167						
N-Nitrosodi-n-propylamine	< 167		µg/kg wet	167						
N-Nitrosodiphenylamine	< 330		µg/kg wet	330						
Pentachlorophenol	< 330		µg/kg wet	330						
Phenanthrene	< 66.7		µg/kg wet	66.7						
Phenol	< 330		µg/kg wet	330						
Pyrene	< 66.7		µg/kg wet	66.7						
Pyridine	< 330		µg/kg wet	330						
1,2,4-Trichlorobenzene	< 330		µg/kg wet	330						
1-Methylnaphthalene	< 66.7		µg/kg wet	66.7						
2,4,5-Trichlorophenol	< 330		µg/kg wet	330						
2,4,6-Trichlorophenol	< 167		µg/kg wet	167						
Pentachloronitrobenzene	< 330		µg/kg wet	330						
1,2,4,5-Tetrachlorobenzene	< 330		µg/kg wet	330						
Surrogate: 2-Fluorobiphenyl	*762*		µg/kg wet		*1670*		*46*	*30-130*		
Surrogate: 2-Fluorophenol	*985*		µg/kg wet		*1670*		*59*	*30-130*		
Surrogate: Nitrobenzene-d5	*876*		µg/kg wet		*1670*		*53*	*30-130*		
Surrogate: Phenol-d5	*933*		µg/kg wet		*1670*		*56*	*30-130*		
Surrogate: Terphenyl-dl4	*1110*		µg/kg wet		*1670*		*67*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*789*		µg/kg wet		*1670*		*47*	*30-130*		
LCS (2002981-BS1)					Prepared & Analyzed: 23-Dec-20					
Acenaphthene	**888**		µg/kg wet	66.7	1670		53	40-140		
Acenaphthylene	**890**		µg/kg wet	66.7	1670		53	40-140		
Aniline	**527**	QC6	µg/kg wet	330	1670		32	40-140		
Anthracene	**1050**		µg/kg wet	66.7	1670		63	40-140		
Azobenzene/Diphenyldiazene	**922**		µg/kg wet	330	1670		55	40-140		
Benzidine	**901**		µg/kg wet	660	1670		54	40-140		
Benzo (a) anthracene	**1160**		µg/kg wet	66.7	1670		70	40-140		
Benzo (a) pyrene	**1210**		µg/kg wet	66.7	1670		72	40-140		
Benzo (b) fluoranthene	**1260**		µg/kg wet	66.7	1670		76	40-140		
Benzo (g,h,i) perylene	**1210**		µg/kg wet	66.7	1670		72	40-140		
Benzo (k) fluoranthene	**1230**		µg/kg wet	66.7	1670		74	40-140		
Benzoic acid	**248**	QC6	µg/kg wet	330	1670		15	30-130		
Benzyl alcohol	**682**		µg/kg wet	330	1670		41	40-140		
Bis(2-chloroethoxy)methane	**896**		µg/kg wet	330	1670		54	40-140		
Bis(2-chloroethyl)ether	**765**		µg/kg wet	167	1670		46	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

SW846 8270D

Batch 2002981 - SW846 3546

LCS (2002981-BS1) Prepared & Analyzed: 23-Dec-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Bis(2-chloroisopropyl)ether	**935**		µg/kg wet	167	1670		56	40-140		
Bis(2-ethylhexyl)phthalate	**1160**		µg/kg wet	167	1670		70	40-140		
4-Bromophenyl phenyl ether	**998**		µg/kg wet	330	1670		60	40-140		
Butyl benzyl phthalate	**1130**		µg/kg wet	330	1670		68	40-140		
Carbazole	**1060**		µg/kg wet	167	1670		64	40-140		
4-Chloro-3-methylphenol	**874**		µg/kg wet	330	1670		52	30-130		
4-Chloroaniline	**669**		µg/kg wet	167	1670		40	40-140		
2-Chloronaphthalene	**950**		µg/kg wet	330	1670		57	40-140		
2-Chlorophenol	**979**		µg/kg wet	167	1670		59	30-130		
4-Chlorophenyl phenyl ether	**718**		µg/kg wet	330	1670		43	40-140		
Chrysene	**1110**		µg/kg wet	66.7	1670		67	40-140		
Dibenzo (a,h) anthracene	**1260**		µg/kg wet	66.7	1670		76	40-140		
Dibenzofuran	**1010**		µg/kg wet	167	1670		60	40-140		
1,2-Dichlorobenzene	**1150**		µg/kg wet	330	1670		69	40-140		
1,3-Dichlorobenzene	**1050**		µg/kg wet	330	1670		63	40-140		
1,4-Dichlorobenzene	**969**		µg/kg wet	330	1670		58	40-140		
3,3´-Dichlorobenzidine	**1100**		µg/kg wet	330	1670		66	40-140		
2,4-Dichlorophenol	**918**		µg/kg wet	167	1670		55	30-130		
Diethyl phthalate	**976**		µg/kg wet	330	1670		59	40-140		
Dimethyl phthalate	**815**		µg/kg wet	330	1670		49	40-140		
2,4-Dimethylphenol	**867**		µg/kg wet	330	1670		52	30-130		
Di-n-butyl phthalate	**1040**		µg/kg wet	330	1670		62	40-140		
4,6-Dinitro-2-methylphenol	**778**		µg/kg wet	330	1670		47	30-130		
2,4-Dinitrophenol	**424**	QC6	µg/kg wet	330	1670		25	30-130		
2,4-Dinitrotoluene	**1100**		µg/kg wet	167	1670		66	40-140		
2,6-Dinitrotoluene	**1100**		µg/kg wet	167	1670		66	40-140		
Di-n-octyl phthalate	**1270**		µg/kg wet	330	1670		76	40-140		
Fluoranthene	**1110**		µg/kg wet	66.7	1670		66	40-140		
Fluorene	**826**		µg/kg wet	66.7	1670		50	40-140		
Hexachlorobenzene	**1110**		µg/kg wet	167	1670		67	40-140		
Hexachlorobutadiene	**985**		µg/kg wet	167	1670		59	40-140		
Hexachlorocyclopentadiene	**878**		µg/kg wet	167	1670		53	40-140		
Hexachloroethane	**1130**		µg/kg wet	167	1670		68	40-140		
Indeno (1,2,3-cd) pyrene	**1150**		µg/kg wet	66.7	1670		69	40-140		
Isophorone	**858**		µg/kg wet	167	1670		51	40-140		
2-Methylnaphthalene	**1280**		µg/kg wet	66.7	1670		77	40-140		
2-Methylphenol	**970**		µg/kg wet	330	1670		58	30-130		
3 & 4-Methylphenol	**1030**		µg/kg wet	330	1670		62	30-130		
Naphthalene	**917**		µg/kg wet	66.7	1670		55	40-140		
2-Nitroaniline	**874**		µg/kg wet	330	1670		52	40-140		
3-Nitroaniline	**916**		µg/kg wet	330	1670		55	40-140		
4-Nitroaniline	**914**		µg/kg wet	167	1670		55	40-140		
Nitrobenzene	**1000**		µg/kg wet	167	1670		60	40-140		
2-Nitrophenol	**925**		µg/kg wet	167	1670		55	30-130		
4-Nitrophenol	**1030**		µg/kg wet	330	1670		62	30-130		
N-Nitrosodimethylamine	**752**		µg/kg wet	167	1670		45	40-140		
N-Nitrosodi-n-propylamine	**992**		µg/kg wet	167	1670		60	40-140		
N-Nitrosodiphenylamine	**1020**		µg/kg wet	330	1670		61	40-140		
Pentachlorophenol	**795**		µg/kg wet	330	1670		48	30-130		
Phenanthrene	**1060**		µg/kg wet	66.7	1670		64	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2002981 - SW846 3546										
LCS (2002981-BS1)					Prepared & Analyzed: 23-Dec-20					
Phenol	**832**		µg/kg wet	330	1670		50	30-130		
Pyrene	**1140**		µg/kg wet	66.7	1670		69	40-140		
Pyridine	**828**		µg/kg wet	330	1670		50	40-140		
1,2,4-Trichlorobenzene	**1070**		µg/kg wet	330	1670		64	40-140		
1-Methylnaphthalene	**905**		µg/kg wet	66.7	1670		54	40-140		
2,4,5-Trichlorophenol	**836**		µg/kg wet	330	1670		50	30-130		
2,4,6-Trichlorophenol	**795**		µg/kg wet	167	1670		48	30-130		
Pentachloronitrobenzene	**1140**		µg/kg wet	330	1670		69	40-140		
1,2,4,5-Tetrachlorobenzene	**867**		µg/kg wet	330	1670		52	40-140		
Surrogate: 2-Fluorobiphenyl	*840*		µg/kg wet		*1670*		*50*	*30-130*		
Surrogate: 2-Fluorophenol	*1020*		µg/kg wet		*1670*		*61*	*30-130*		
Surrogate: Nitrobenzene-d5	*901*		µg/kg wet		*1670*		*54*	*30-130*		
Surrogate: Phenol-d5	*1080*		µg/kg wet		*1670*		*65*	*30-130*		
Surrogate: Terphenyl-dl4	*1150*		µg/kg wet		*1670*		*69*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*948*		µg/kg wet		*1670*		*57*	*30-130*		
LCS Dup (2002981-BSD1)					Prepared & Analyzed: 23-Dec-20					
Acenaphthene	**963**		µg/kg wet	66.7	1670		58	40-140	8	30
Acenaphthylene	**966**		µg/kg wet	66.7	1670		58	40-140	8	30
Aniline	**578**	QC6	µg/kg wet	330	1670		35	40-140	9	30
Anthracene	**1160**		µg/kg wet	66.7	1670		70	40-140	10	30
Azobenzene/Diphenyldiazene	**1020**		µg/kg wet	330	1670		61	40-140	10	30
Benzidine	**858**		µg/kg wet	660	1670		51	40-140	5	30
Benzo (a) anthracene	**1250**		µg/kg wet	66.7	1670		75	40-140	8	30
Benzo (a) pyrene	**1350**		µg/kg wet	66.7	1670		81	40-140	11	30
Benzo (b) fluoranthene	**1410**		µg/kg wet	66.7	1670		85	40-140	11	30
Benzo (g,h,i) perylene	**1350**		µg/kg wet	66.7	1670		81	40-140	11	30
Benzo (k) fluoranthene	**1410**		µg/kg wet	66.7	1670		85	40-140	14	30
Benzoic acid	**277**	QC6	µg/kg wet	330	1670		17	30-130	11	30
Benzyl alcohol	**694**		µg/kg wet	330	1670		42	40-140	2	30
Bis(2-chloroethoxy)methane	**960**		µg/kg wet	330	1670		58	40-140	7	30
Bis(2-chloroethyl)ether	**926**		µg/kg wet	167	1670		56	40-140	19	30
Bis(2-chloroisopropyl)ether	**975**		µg/kg wet	167	1670		58	40-140	4	30
Bis(2-ethylhexyl)phthalate	**1260**		µg/kg wet	167	1670		76	40-140	8	30
4-Bromophenyl phenyl ether	**1100**		µg/kg wet	330	1670		66	40-140	10	30
Butyl benzyl phthalate	**1240**		µg/kg wet	330	1670		74	40-140	9	30
Carbazole	**1170**		µg/kg wet	167	1670		70	40-140	10	30
4-Chloro-3-methylphenol	**971**		µg/kg wet	330	1670		58	30-130	11	30
4-Chloroaniline	**681**		µg/kg wet	167	1670		41	40-140	2	30
2-Chloronaphthalene	**1050**		µg/kg wet	330	1670		63	40-140	10	30
2-Chlorophenol	**1020**		µg/kg wet	167	1670		61	30-130	4	30
4-Chlorophenyl phenyl ether	**763**		µg/kg wet	330	1670		46	40-140	6	30
Chrysene	**1220**		µg/kg wet	66.7	1670		73	40-140	9	30
Dibenzo (a,h) anthracene	**1400**		µg/kg wet	66.7	1670		84	40-140	10	30
Dibenzofuran	**1100**		µg/kg wet	167	1670		66	40-140	9	30
1,2-Dichlorobenzene	**1190**		µg/kg wet	330	1670		72	40-140	3	30
1,3-Dichlorobenzene	**1100**		µg/kg wet	330	1670		66	40-140	5	30
1,4-Dichlorobenzene	**1030**		µg/kg wet	330	1670		62	40-140	6	30
3,3´-Dichlorobenzidine	**1200**		µg/kg wet	330	1670		72	40-140	8	30
2,4-Dichlorophenol	**1000**		µg/kg wet	167	1670		60	30-130	9	30
Diethyl phthalate	**1060**		µg/kg wet	330	1670		63	40-140	8	30

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2002981 - SW846 3546										
LCS Dup (2002981-BSD1)					Prepared & Analyzed: 23-Dec-20					
Dimethyl phthalate	**900**		µg/kg wet	330	1670		54	40-140	10	30
2,4-Dimethylphenol	**944**		µg/kg wet	330	1670		57	30-130	9	30
Di-n-butyl phthalate	**1150**		µg/kg wet	330	1670		69	40-140	10	30
4,6-Dinitro-2-methylphenol	**895**		µg/kg wet	330	1670		54	30-130	14	30
2,4-Dinitrophenol	**531**		µg/kg wet	330	1670		32	30-130	22	30
2,4-Dinitrotoluene	**1220**		µg/kg wet	167	1670		73	40-140	11	30
2,6-Dinitrotoluene	**1220**		µg/kg wet	167	1670		73	40-140	11	30
Di-n-octyl phthalate	**1440**		µg/kg wet	330	1670		87	40-140	13	30
Fluoranthene	**1220**		µg/kg wet	66.7	1670		73	40-140	10	30
Fluorene	**906**		µg/kg wet	66.7	1670		54	40-140	9	30
Hexachlorobenzene	**1240**		µg/kg wet	167	1670		74	40-140	11	30
Hexachlorobutadiene	**1050**		µg/kg wet	167	1670		63	40-140	7	30
Hexachlorocyclopentadiene	**1050**		µg/kg wet	167	1670		63	40-140	18	30
Hexachloroethane	**1160**		µg/kg wet	167	1670		70	40-140	3	30
Indeno (1,2,3-cd) pyrene	**1400**		µg/kg wet	66.7	1670		84	40-140	19	30
Isophorone	**940**		µg/kg wet	167	1670		56	40-140	9	30
2-Methylnaphthalene	**1570**		µg/kg wet	66.7	1670		94	40-140	21	30
2-Methylphenol	**1020**		µg/kg wet	330	1670		61	30-130	5	30
3 & 4-Methylphenol	**1070**		µg/kg wet	330	1670		64	30-130	5	30
Naphthalene	**994**		µg/kg wet	66.7	1670		60	40-140	8	30
2-Nitroaniline	**961**		µg/kg wet	330	1670		58	40-140	9	30
3-Nitroaniline	**1020**		µg/kg wet	330	1670		61	40-140	11	30
4-Nitroaniline	**1020**		µg/kg wet	167	1670		61	40-140	11	30
Nitrobenzene	**1080**		µg/kg wet	167	1670		65	40-140	8	30
2-Nitrophenol	**1000**		µg/kg wet	167	1670		60	30-130	8	30
4-Nitrophenol	**1140**		µg/kg wet	330	1670		68	30-130	10	30
N-Nitrosodimethylamine	**689**		µg/kg wet	167	1670		41	40-140	9	30
N-Nitrosodi-n-propylamine	**1030**		µg/kg wet	167	1670		62	40-140	3	30
N-Nitrosodiphenylamine	**1140**		µg/kg wet	330	1670		68	40-140	11	30
Pentachlorophenol	**880**		µg/kg wet	330	1670		53	30-130	10	30
Phenanthrene	**1170**		µg/kg wet	66.7	1670		70	40-140	10	30
Phenol	**891**		µg/kg wet	330	1670		53	30-130	7	30
Pyrene	**1250**		µg/kg wet	66.7	1670		75	40-140	9	30
Pyridine	**683**		µg/kg wet	330	1670		41	40-140	19	30
1,2,4-Trichlorobenzene	**1160**		µg/kg wet	330	1670		69	40-140	8	30
1-Methylnaphthalene	**981**		µg/kg wet	66.7	1670		59	40-140	8	30
2,4,5-Trichlorophenol	**890**		µg/kg wet	330	1670		53	30-130	6	30
2,4,6-Trichlorophenol	**869**		µg/kg wet	167	1670		52	30-130	9	30
Pentachloronitrobenzene	**1150**		µg/kg wet	330	1670		69	40-140	0.3	30
1,2,4,5-Tetrachlorobenzene	**927**		µg/kg wet	330	1670		56	40-140	7	30
Surrogate: 2-Fluorobiphenyl	*927*		µg/kg wet		*1670*		*56*	*30-130*		
Surrogate: 2-Fluorophenol	*1110*		µg/kg wet		*1670*		*66*	*30-130*		
Surrogate: Nitrobenzene-d5	*999*		µg/kg wet		*1670*		*60*	*30-130*		
Surrogate: Phenol-d5	*1140*		µg/kg wet		*1670*		*68*	*30-130*		
Surrogate: Terphenyl-dl4	*1300*		µg/kg wet		*1670*		*78*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1070*		µg/kg wet		*1670*		*64*	*30-130*		

Semivolatile Organic Compounds by GC - Quality Control

SW846 8082A

Batch 2002980 - SW846 3550C

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2002980-BLK1)					Prepared & Analyzed: 23-Dec-20					
Aroclor-1016	< 20.0		µg/kg wet	20.0						
Aroclor-1016 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1221	< 20.0		µg/kg wet	20.0						
Aroclor-1221 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1232	< 20.0		µg/kg wet	20.0						
Aroclor-1232 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1242	< 20.0		µg/kg wet	20.0						
Aroclor-1242 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1248	< 20.0		µg/kg wet	20.0						
Aroclor-1248 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1254	< 20.0		µg/kg wet	20.0						
Aroclor-1254 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1260	< 20.0		µg/kg wet	20.0						
Aroclor-1260 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1262	< 20.0		µg/kg wet	20.0						
Aroclor-1262 [2C]	< 20.0		µg/kg wet	20.0						
Aroclor-1268	< 20.0		µg/kg wet	20.0						
Aroclor-1268 [2C]	< 20.0		µg/kg wet	20.0						
Surrogate: 2,4,5,6-TC-M-Xylene (IS)	*7.51*		µg/kg wet		*13.3*		*56*	*30-150*		
Surrogate: 2,4,5,6-TC-M-Xylene (IS) [2C]	*6.84*		µg/kg wet		*13.3*		*51*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*10.3*		µg/kg wet		*13.3*		*77*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*9.20*		µg/kg wet		*13.3*		*69*	*30-150*		
LCS (2002980-BS1)					Prepared & Analyzed: 23-Dec-20					
Aroclor-1016	**129**		µg/kg wet	20.0	167		77	40-140		
Aroclor-1016 [2C]	**127**		µg/kg wet	20.0	167		76	40-140		
Aroclor-1260	**155**		µg/kg wet	20.0	167		93	40-140		
Aroclor-1260 [2C]	**159**		µg/kg wet	20.0	167		95	40-140		
Surrogate: 2,4,5,6-TC-M-Xylene (IS)	*8.42*		µg/kg wet		*13.3*		*63*	*30-150*		
Surrogate: 2,4,5,6-TC-M-Xylene (IS) [2C]	*7.89*		µg/kg wet		*13.3*		*59*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*11.7*		µg/kg wet		*13.3*		*88*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*11.2*		µg/kg wet		*13.3*		*84*	*30-150*		
LCS Dup (2002980-BSD1)					Prepared & Analyzed: 23-Dec-20					
Aroclor-1016	**128**		µg/kg wet	20.0	167		77	40-140	0.5	30
Aroclor-1016 [2C]	**129**		µg/kg wet	20.0	167		77	40-140	1	30
Aroclor-1260	**151**		µg/kg wet	20.0	167		91	40-140	3	30
Aroclor-1260 [2C]	**156**		µg/kg wet	20.0	167		94	40-140	2	30
Surrogate: 2,4,5,6-TC-M-Xylene (IS)	*8.09*		µg/kg wet		*13.3*		*61*	*30-150*		
Surrogate: 2,4,5,6-TC-M-Xylene (IS) [2C]	*7.73*		µg/kg wet		*13.3*		*58*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*11.6*		µg/kg wet		*13.3*		*87*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*11.0*		µg/kg wet		*13.3*		*82*	*30-150*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8100Mod.										
Batch 2002977 - SW846 3546										
Blank (2002977-BLK1)					Prepared & Analyzed: 23-Dec-20					
Total Petroleum Hydrocarbons	< 13.3		mg/kg wet	13.3						
Surrogate: o-Terphenyl	*3.77*		mg/kg wet		*6.67*		*57*	*40-140*		
Surrogate: 1-Chlorooctadecane	*4.69*		mg/kg wet		*6.67*		*70*	*40-140*		
LCS (2002977-BS1)					Prepared & Analyzed: 23-Dec-20					
Total Petroleum Hydrocarbons	**206**		mg/kg wet	13.3	333		62	40-140		
Surrogate: o-Terphenyl	*5.02*		mg/kg wet		*6.67*		*75*	*40-140*		
Surrogate: 1-Chlorooctadecane	*6.06*		mg/kg wet		*6.67*		*91*	*40-140*		
LCS Dup (2002977-BSD1)					Prepared & Analyzed: 23-Dec-20					
Total Petroleum Hydrocarbons	**215**		mg/kg wet	13.3	333		65	40-140	5	30
Surrogate: o-Terphenyl	*4.73*		mg/kg wet		*6.67*		*71*	*40-140*		
Surrogate: 1-Chlorooctadecane	*5.74*		mg/kg wet		*6.67*		*86*	*40-140*		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 6010C										
Batch 2002965 - SW846 3050B										
Blank (2002965-BLK1)					Prepared & Analyzed: 23-Dec-20					
Arsenic	< 1.44		mg/kg wet	1.44						
Cadmium	< 0.479		mg/kg wet	0.479						
Chromium	< 0.957		mg/kg wet	0.957						
Lead	< 1.44		mg/kg wet	1.44						
Selenium	< 1.44		mg/kg wet	1.44						
Silver	< 1.44		mg/kg wet	1.44						
Sulfur	< 23.9		mg/kg wet	23.9						
Barium	< 0.957		mg/kg wet	0.957						
LCS (2002965-BS1)					Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Sulfur	**112**		mg/kg wet	25.7	129		87	85-115		
LCS Dup (2002965-BSD1)					Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Sulfur	**129**		mg/kg wet	26.3	131		98	85-115	14	30
Duplicate (2002965-DUP1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Arsenic	**2.53**	J,QR8	mg/kg dry	9.05		8.13			105	20
Cadmium	**0.754**	J	mg/kg dry	3.02		0.915			19	20
Chromium	**12.2**		mg/kg dry	6.03		12.8			5	20
Lead	**21.3**		mg/kg dry	9.05		26.0			20	20
Selenium	< 9.05		mg/kg dry	9.05		4.41				20
Silver	< 9.05		mg/kg dry	9.05		BRL				20
Sulfur	**729**		mg/kg dry	151		735			0.8	20
Barium	**53.9**		mg/kg dry	6.03		51.5			5	20
Matrix Spike (2002965-MS1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Arsenic	**751**		mg/kg dry	9.38	782	8.13	95	75-125		
Cadmium	**689**		mg/kg dry	3.13	782	0.915	88	75-125		
Chromium	**817**		mg/kg dry	6.25	782	12.8	103	75-125		
Lead	**737**		mg/kg dry	9.38	782	26.0	91	75-125		
Selenium	**682**		mg/kg dry	9.38	782	4.41	87	75-125		
Silver	**772**		mg/kg dry	9.38	782	BRL	99	75-125		
Sulfur	**1300**		mg/kg dry	156	782	735	72	70-130		
Barium	**788**		mg/kg dry	6.25	782	51.5	94	75-125		
Matrix Spike Dup (2002965-MSD1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Arsenic	**739**		mg/kg dry	9.33	777	8.13	94	75-125	2	20
Cadmium	**686**		mg/kg dry	3.11	777	0.915	88	75-125	0.5	20
Chromium	**814**		mg/kg dry	6.22	777	12.8	103	75-125	0.5	20
Lead	**734**		mg/kg dry	9.33	777	26.0	91	75-125	0.4	20
Selenium	**697**		mg/kg dry	9.33	777	4.41	89	75-125	2	20
Silver	**769**		mg/kg dry	9.33	777	BRL	99	75-125	0.4	20
Sulfur	**1300**		mg/kg dry	155	777	735	72	70-130	0.02	20
Barium	**786**		mg/kg dry	6.22	777	51.5	95	75-125	0.2	20
Reference (2002965-SRM1)					Prepared & Analyzed: 23-Dec-20					
Arsenic	**125**		mg/kg wet	1.50	150		83	82.7-117.9		
Cadmium	**101**		mg/kg wet	0.500	98.5		103	82.2-117		
Chromium	**101**		mg/kg wet	1.00	109		93	82-117.9		
Lead	**64.0**		mg/kg wet	1.50	72.1		89	83.4-142.7		
Selenium	**123**	QC3	mg/kg wet	1.50	160		77	79.1-120.9		
Silver	**26.7**	QC2	mg/kg wet	1.50	19.2		139	80.6-119.8		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

SW846 6010C

Batch 2002965 - SW846 3050B

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Reference (2002965-SRM1)					Prepared & Analyzed: 23-Dec-20					
Barium	**110**		mg/kg wet	1.00	128		86	82.6-117.4		
Reference (2002965-SRM2)					Prepared & Analyzed: 23-Dec-20					
Arsenic	**125**	QM9	mg/kg wet	1.50	161		78	82.7-117.9		
Cadmium	**102**		mg/kg wet	0.500	106		96	82.2-117		
Chromium	**102**		mg/kg wet	1.00	117		87	82-117.9		
Lead	**67.6**		mg/kg wet	1.50	77.4		87	83.4-142.7		
Selenium	**121**	QC3	mg/kg wet	1.50	171		70	79.1-120.9		
Silver	**31.6**	QC2	mg/kg wet	1.50	20.6		153	80.6-119.8		
Barium	**112**	QM9	mg/kg wet	1.00	138		82	82.6-117.4		

SW846 7471B

Batch 2002966 - EPA200/SW7000 Series

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2002966-BLK1)					Prepared & Analyzed: 23-Dec-20					
Mercury	< 0.0304		mg/kg wet	0.0304						
Duplicate (2002966-DUP1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Mercury	< 0.174		mg/kg dry	0.174		BRL				20
Matrix Spike (2002966-MS1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Mercury	**1.41**		mg/kg dry	0.167	1.16	BRL	121	75-125		
Matrix Spike Dup (2002966-MSD1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Mercury	**1.55**		mg/kg dry	0.185	1.29	BRL	120	75-125	10	20
Post Spike (2002966-PS1)			**Source: SC60301-01**		Prepared & Analyzed: 23-Dec-20					
Mercury	**1.27**		mg/kg dry	0.157	1.09	BRL	117	80-120		
Reference (2002966-SRM1)					Prepared & Analyzed: 23-Dec-20					
Mercury	**9.34**	D	mg/kg wet	0.600	7.87		119	72.4-127.6		

TCLP Metals by EPA 1311 & 6000/7000 Series Methods - Quality Control

SW846 1311/6010C

Batch 2002969 - SW846 3010A

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2002969-BLK1)					Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	< 0.0800		mg/l	0.0800						
Cadmium	< 0.0050		mg/l	0.0050						
Chromium	< 0.0200		mg/l	0.0200						
Lead	< 0.0150		mg/l	0.0150						
Selenium	< 0.0300		mg/l	0.0300						
Silver	**0.0165**	QB2	mg/l	0.0100						
Barium	< 0.100		mg/l	0.100						
LCS (2002969-BS1)					Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	**2.49**		mg/l	0.0800	2.50		100	85-115		
Cadmium	**2.56**		mg/l	0.0050	2.50		102	85-115		
Chromium	**2.59**		mg/l	0.0200	2.50		104	85-115		
Lead	**2.69**		mg/l	0.0150	2.50		108	85-115		
Selenium	**2.37**		mg/l	0.0300	2.50		95	85-115		
Silver	**2.70**		mg/l	0.0100	2.50		108	85-115		
Barium	**2.68**		mg/l	0.100	2.50		107	85-115		
LCS Dup (2002969-BSD1)					Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	**2.28**		mg/l	0.0800	2.50		91	85-115	9	20
Cadmium	**2.55**		mg/l	0.0050	2.50		102	85-115	0.5	20
Chromium	**2.43**		mg/l	0.0200	2.50		97	85-115	6	20
Lead	**2.68**		mg/l	0.0150	2.50		107	85-115	0.7	20
Selenium	**2.36**		mg/l	0.0300	2.50		95	85-115	0.4	20
Silver	**2.68**		mg/l	0.0100	2.50		107	85-115	0.4	20
Barium	**2.66**		mg/l	0.100	2.50		107	85-115	0.6	20
Duplicate (2002969-DUP1)				**Source: SC60301-03**	Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	**0.102**	QR8	mg/l	0.0800		0.0716			35	20
Cadmium	< 0.0050		mg/l	0.0050		BRL				20
Chromium	**0.0376**	R06	mg/l	0.0200		0.0397			5	20
Lead	**0.0695**		mg/l	0.0150		0.0654			6	20
Selenium	**0.0108**	J,QR8	mg/l	0.0300		0.0066			48	20
Silver	< 0.0100		mg/l	0.0100		BRL				20
Barium	**0.203**		mg/l	0.100		0.192			6	20
Matrix Spike (2002969-MS1)				**Source: SC60301-02**	Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	**2.58**		mg/l	0.0800	2.50	0.0185	102	75-125		
Cadmium	**2.54**		mg/l	0.0050	2.50	0.0007	102	75-125		
Chromium	**2.55**		mg/l	0.0200	2.50	0.0135	101	75-125		
Lead	**2.58**		mg/l	0.0150	2.50	0.0823	100	75-125		
Selenium	**2.50**		mg/l	0.0300	2.50	0.0121	100	75-125		
Silver	**2.75**		mg/l	0.0100	2.50	0.0040	110	75-125		
Barium	**2.86**		mg/l	0.100	2.50	0.183	107	75-125		
Matrix Spike Dup (2002969-MSD1)				**Source: SC60301-02**	Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	**2.53**		mg/l	0.0800	2.50	0.0185	100	75-125	2	20
Cadmium	**2.54**		mg/l	0.0050	2.50	0.0007	102	75-125	0.01	20
Chromium	**2.52**		mg/l	0.0200	2.50	0.0135	100	75-125	1	20
Lead	**2.61**		mg/l	0.0150	2.50	0.0823	101	75-125	0.8	20
Selenium	**2.52**		mg/l	0.0300	2.50	0.0121	100	75-125	0.8	20
Silver	**2.74**		mg/l	0.0100	2.50	0.0040	110	75-125	0.2	20
Barium	**2.89**		mg/l	0.100	2.50	0.183	108	75-125	0.9	20
Post Spike (2002969-PS1)				**Source: SC60301-02**	Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Arsenic	**2.67**		mg/l	0.0800	2.50	0.0185	106	80-120		
Cadmium	**2.54**		mg/l	0.0050	2.50	0.0007	101	80-120		

TCLP Metals by EPA 1311 & 6000/7000 Series Methods - Quality Control

SW846 1311/6010C

Batch 2002969 - SW846 3010A

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Post Spike (2002969-PS1)			**Source: SC60301-02**		Prepared: 23-Dec-20 Analyzed: 24-Dec-20					
Chromium	**2.67**		mg/l	0.0200	2.50	0.0135	106	80-120		
Lead	**2.60**		mg/l	0.0150	2.50	0.0823	101	80-120		
Selenium	**2.48**		mg/l	0.0300	2.50	0.0121	99	80-120		
Silver	**2.73**		mg/l	0.0100	2.50	0.0040	109	80-120		
Barium	**2.84**		mg/l	0.100	2.50	0.183	106	80-120		

SW846 1311/7470A

Batch 2002970 - EPA200/SW7000 Series

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2002970-BLK1)					Prepared & Analyzed: 23-Dec-20					
Mercury	< 0.00070		mg/l	0.00070						
LCS (2002970-BS1)					Prepared & Analyzed: 23-Dec-20					
Mercury	**0.00462**		mg/l	0.00070	0.00500		92	85-115		
Duplicate (2002970-DUP1)			**Source: SC60301-03**		Prepared & Analyzed: 23-Dec-20					
Mercury	< 0.00070	R01	mg/l	0.00070		BRL				20
Matrix Spike (2002970-MS1)			**Source: SC60301-02**		Prepared & Analyzed: 23-Dec-20					
Mercury	**0.00564**		mg/l	0.00070	0.00500	BRL	113	75-125		
Matrix Spike Dup (2002970-MSD1)			**Source: SC60301-02**		Prepared & Analyzed: 23-Dec-20					
Mercury	**0.00546**		mg/l	0.00070	0.00500	BRL	109	75-125	3	20
Post Spike (2002970-PS1)			**Source: SC60301-02**		Prepared & Analyzed: 23-Dec-20					
Mercury	**0.00538**		mg/l	0.00070	0.00500	BRL	108	80-120		

Toxicity Characteristics - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 9045D										
Batch 2002972 - General Preparation										
Duplicate (2002972-DUP1)			**Source: SC60301-02**		Prepared & Analyzed: 22-Dec-20					
pH	**7.04**		pH Units			7.01			0.4	5
Reference (2002972-SRM1)					Prepared & Analyzed: 22-Dec-20					
pH	**6.08**		pH Units		6.00		101	97.5-102.5		
Reference (2002972-SRM2)					Prepared & Analyzed: 22-Dec-20					
pH	**6.11**		pH Units		6.00		102	97.5-102.5		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 7.3.3.1/90										
Batch 557809A - SW846 7.3.3.1/90										
Blank (CH37198-BLK)					Prepared & Analyzed: 24-Dec-20					
Reactivity Cyanide	< 5		mg/kg	5			BRL	-		
LCS (CH37198-LCS)					Prepared & Analyzed: 24-Dec-20					
Reactivity Cyanide	**0.4240**		mg/kg	5	0.44		96.4	85-115		30
SW846 CH7										
Batch 557809B - SW846 7.3.3.1/90										
Blank (CH37198-BLK)					Prepared & Analyzed: 24-Dec-20					
Reactivity Sulfide	< 20		mg/kg	20			BRL	-		
LCS (CH37198-LCS)					Prepared & Analyzed: 24-Dec-20					
Reactivity Sulfide	**0**		mg/kg	20	40		108	80-120		30

The following list indicates the date and time low-level VOC soil/sediment samples were placed in the freezer at the lab:

Notes and Definitions

B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
D	Data reported from a dilution
E	This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.
HT2	This sample was received outside the EPA recommended holding time for the analysis specified.
QB2	The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QC3	The spike recovery is outside acceptable limits for the LCS. The batch was accepted based upon the MS and/or MSD meeting the LCS limits criteria.
QC6	Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
R01	The Reporting Limit has been raised to account for matrix interference.
R06	MRL raised to correlate to batch QC reporting limits.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
[2C]	Indicates concentration was reported from the secondary, confirmation column.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

Gasoline - includes regular, unleaded, premium, etc.
Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
Fuel Oil #4 - includes #4 fuel oil
Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
Motor Oil - includes virgin and waste automobile oil
Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
Aviation Fuel - includes kerosene, Jet A and JP-4
Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as Calculated as.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC60301 - [illegible]

eurofins

Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:

☐ Standard TAT - 7 to 10 business days

☑ Rush TAT - Date Needed: ______

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Telephone #: 978-853-1561
Project Mgr: ______

Invoice To: AECOM
250 Apollo Drive
Chelmsford, MA 01824

P.O No.: ______ Quote #: ______

Project No: Unitil - HDD
Site Name: Rochester, NH
Location: ______ State: ______
Sampler(s): ______

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=______ 12=______

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=______ X2=______ X3=______

G= Grab C=Compsite

List Preservative Code below:

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TPH by GC/FID	Total VOCs 8260	Total SVOCs 8270	Total Metals RCRA 8	Total Sulfur	Reactivity Cyanide/Sulfide			Check if chlorinated
SC60301.01	HDD-01-S	12/18/20	12:52	G	SL			2			X	X	X	X	X	X			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ______
State-specific reporting standards:

Relinquished by:	Received by:	12 22 Date: 20	Time:	Temp °C
C. Steve Howe AECOM		~~12/21/20~~	1530	Observed 1.3
		12/22/20	17:50	Corecction Factor +1
				Corrected 2.3
				IR ID # 6

☐ EDD format: ______
☐ E-mail to: ______

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

SL60301

eurofins

Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

☐ Standard TAT - 7 to 10 business days

☒ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Dr
Chelmsford, MA

Telephone #: 978-853-1561

Project Mgr: ____________

Invoice To: AECOM
250 Apollo Dr
Chelmsford, MA 01824

P.O No.: ____________ Quote #: ____________

Project No: Unit 1 - HDD

Site Name: Rochester, NH

Location: ____________ State: ______

Sampler(s): ____________

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=______ 12=______

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1=______ X2=______ X3=______

G= Grab C=Compsite

List Preservative Code below:

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		Total PCBs	TCLP VOCs	TCLP SVOCs	TCLP RCRA 8 Metals	pH	Reactivity cyanide & sulfide			Check if chlorinated
SL60301-02	HDD-01-M	12/18/20	1337	G	SL			2			X	X	X	X	X	X			☐
↓ 03	HDD-02-ME	12/21/20	1100	G	SL			2			X	X	X	X	X	X			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐
																			☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards:

Relinquished by:	Received by:	Date: 12 22 20	Time:	Temp °C
C. Steve Howe		~~12/21/20~~	1530	Observed 1.3
		12/22/20	17:50	Corecction Factor +1
				Corrected 2.3
				IR ID # 6

☐ EDD format: ____________

☐ E-mail to: ____________

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

eurofins | Spectrum Analytical

646 Camp Ave
North Kingstown, RI 02852
(413) 789-9018

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	*Client ID*	*Analysis*	*Added*
SC60301-01	HDD-01-S	Volatile Organic Compounds by SW846 8260	12/24/2020

Batch Summary

'[none]'

Subcontracted Analyses

SC60301-01 (HDD-01-S)
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002934

General Chemistry Parameters

SC60301-01 (HDD-01-S)
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002965

Total Metals by EPA 6000/7000 Series Methods

2002965-BLK1
2002965-BS1
2002965-BSD1
2002965-DUP1
2002965-MS1
2002965-MSD1
2002965-SRM1
2002965-SRM2
SC60301-01 (HDD-01-S)

2002966

Total Metals by EPA 6000/7000 Series Methods

2002966-BLK1
2002966-DUP1
2002966-MS1
2002966-MSD1
2002966-PS1
2002966-SRM1
SC60301-01 (HDD-01-S)

2002967

Semivolatile Organic Compounds by GCMS

SC60301-02 (HDD-01-M)
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)
SC60301-03 (HDD-02-ME)

2002968

Volatile Organic Compounds

SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002969

TCLP Metals by EPA 1311 & 6000/7000 Series Methods

2002969-BLK1
2002969-BS1
2002969-BSD1
2002969-DUP1
2002969-MS1
2002969-MSD1
2002969-PS1
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002970

TCLP Metals by EPA 1311 & 6000/7000 Series Methods

2002970-BLK1
2002970-BS1
2002970-DUP1
2002970-MS1
2002970-MSD1
2002970-PS1
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002972

Toxicity Characteristics

2002972-DUP1
2002972-SRM1
2002972-SRM2
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002975

Volatile Organic Compounds

2002975-BLK1
2002975-BS1
2002975-BSD1
SC60301-01 (HDD-01-S)

2002976

Volatile Organic Compounds

2002976-BLK1
2002976-BLK2
2002976-BS1
2002976-BSD1
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002977

Extractable Petroleum Hydrocarbons

2002977-BLK1
2002977-BS1
2002977-BSD1
SC60301-01 (HDD-01-S)

2002978

Semivolatile Organic Compounds by GCMS

2002978-BLK2
2002978-BS1
2002978-BSD1
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002980

Semivolatile Organic Compounds by GC

2002980-BLK1
2002980-BS1
2002980-BSD1
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

2002981

Semivolatile Organic Compounds by GCMS

2002981-BLK1
2002981-BS1
2002981-BSD1
SC60301-01 (HDD-01-S)

2002995

Volatile Organic Compounds

2002995-BLK1
2002995-BS1
2002995-BSD1
SC60301-01RE1 (HDD-01-S)

557766A

Subcontracted Analyses

SC60301-01 (HDD-01-S)
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

557809A

Subcontracted Analyses

CH37198-BLK
CH37198-LCS
SC60301-01 (HDD-01-S)
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

557809B

Subcontracted Analyses

CH37198-BLK
CH37198-LCS
SC60301-01 (HDD-01-S)
SC60301-02 (HDD-01-M)
SC60301-03 (HDD-02-ME)

Appendix C Waste Disposal Documentation - Drilling Mud

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 339974
Date: 12/29/2020 10:37 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 1
Miles:
Tons: 12.09

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	59,540 lb	MAN WT	Out 10:37 AM
Tare:	35,360 lb	Scale 1	In 10:26 AM
Net:	24,180 lb		
	12.09 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	12.09 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340183
Date: 1/12/2021 10:24 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 3
Miles:
Tons: 44.70

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	69,600 lb	Scale 1	Out 10:23 AM
Tare:	34,980 lb	Scale 1	In 10:16 AM
Net:	34,620 lb 17.31 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	17.31 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340190
Date: 1/12/2021 12:32 PM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 3
Miles:
Tons: 44.70

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	66,340 lb	MAN WT	Out 12:32 PM
Tare:	35,740 lb	Scale 1	In 12:32 PM
Net:	30,600 lb		
	15.30 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	15.3 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340195
Date: 1/12/2021 2:45 PM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 4
Miles:
Tons: 60.44

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	66,400 lb	Scale 1	Out 2:45 PM
Tare:	34,920 lb	Scale 1	In 2:36 PM
Net:	31,480 lb 15.74 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	15.74 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No:	340204	
Date:	1/13/2021	7:14 AM
Phone:	6037830228	
Fax:	6037830104	

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 7
Miles:
Tons: 109.25

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	66,420 lb	Scale 1	Out 7:14 AM
Tare:	35,740 lb	Scale 1	In 7:03 AM
Net:	30,680 lb		
	15.34 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	15.34 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340211
Date: 1/13/2021 9:29 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 7
Miles:
Tons: 109.25

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	68,340 lb	Scale 1	Out 9:29 AM
Tare:	35,060 lb	Scale 1	In 9:20 AM
Net:	33,280 lb 16.64 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	16.64 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340216
Date: 1/13/2021 11:31 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 7
Miles:
Tons: 109.25

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	69,180 lb	Scale 1	Out 11:30 AM
Tare:	35,520 lb	Scale 1	In 11:22 AM
Net:	33,660 lb 16.83 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	16.83 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No:	340231
Date:	1/14/2021 7:10 AM
Phone:	6037830228
Fax:	6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 10
Miles:
Tons: 145.37

Truck: GRAFBRO
Location: NH NEW HAMPSHIRE
Weigh Master: ANGELA
Angela Holub

Gross:	57,220 lb	Scale 1	Out 7:10 AM
Tare:	35,500 lb	Scale 1	In 7:02 AM
Net:	21,720 lb 10.86 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	10.86 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340254
Date: 1/14/2021 10:12 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 10
Miles:
Tons: 145.37

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	54,460 lb	Scale 1	Out 10:12 AM
Tare:	36,400 lb	Scale 1	In 10:03 AM
Net:	18,060 lb 9.03 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	9.03 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340266
Date: 1/14/2021 1:28 PM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 10
Miles:
Tons: 145.37

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	67,560 lb	Scale 1	Out 1:28 PM
Tare:	35,100 lb	Scale 1	In 1:06 PM
Net:	32,460 lb 16.23 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	16.23 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340278
Date: 1/15/2021 7:30 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 12
Miles:
Tons: 166.44

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	58,020 lb	Scale 1	Out 7:30 AM
Tare:	35,560 lb	Scale 1	In 7:20 AM
Net:	22,460 lb 11.23 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	11.23 tn					

ESMI of N.H.
67 International Drive
Loudon NH, 03307

Ticket No: 340300
Date: 1/15/2021 10:57 AM
Phone: 6037830228
Fax: 6037830104

Customer: NRC10
NRC East Environmental
19 National Dr.

Franklin MA, 02038

Order No: 13248
Unitil Rochester
Route 125 & Route 16
Rochester NH

Loads: 12
Miles:
Tons: 166.44

Truck: GRAFBROS Graft Brothers
Location: NH NEW HAMPSHIRE

Weigh Master: ANGELA
Angela Holub

Gross:	55,340 lb	Scale 1	Out 10:57 AM
Tare:	35,660 lb	Scale 1	In 10:48 AM
Net:	19,680 lb		
	9.84 tn		

Remarks: Thank You For Your Business

Signature:

Material $
Delivery $
Misc $
Tax $
Total $

MATERIAL	QTY	UNIT-$	DELIVERY $	MISC $	TAX $	TOTAL $
CT01	9.84 tn					

NRC

NON HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
Manifest Document No.
2. Page 1 of 1

3. Generator's Name and Mailing Address
Attn: Mike Dunn
Unitil
6 Liberty Lane West
Hampton NH 03842
4. Generator's Phone (603) 973-1080

A. Non-Hazardous Manifest Document Number
NHZ001 60682

B. S.G.I. (Gen. Site Address)
Former MGP Site - Near 26 Gonic Road
Rochester NH

5. Transporter 1 Company Name
NRC East Environmental Services, Inc.
6. US EPA ID Number MAC300098399

C. S.T.I. (Lic. Plate #)
D. Transporter's Phone 978-405-1505

7. Transporter 2 Company Name
8. US EPA ID Number

E. S.T.I. (Lic. Plate #)
F. Transporter's Phone

9. Designated Facility Name and Site Address
Tradebe Treatment & Recycling Northeast (Newington), LI
410 Shattuck Way
Newington NH 03801
10. US EPA ID Number NHD980521843

G. State Facility's ID
SAME

H. Facility's Phone
800-345-4626

GENERATOR

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Non-RCRA, non-DOT (Non-haz Drilling Mud)	001	TT	00553	G	State NONE State NONE
b.					State State
c.					State State
d.					State State

J. Additional Descriptions for Materials Listed Above
Profile #1000297569
a.
b.
c.
d.

K. Handling Codes for Wastes Listed Above
Interim Final Interim Final
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
ER CONTACT: NRC EAST ENV. SERVICES, INC. - 24 HOURS - 800-899-4672
1)PO#: 160370-TN // REF#: H141
Point of Departure:
NRC JOB# 160370

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

Nick Chirichello
Printed/Typed Name
Signature Nicholas A. Chirichello
Month Day Year 9/15/21

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Walter Rospa
Signature
Date
Month Day Year 9/15/21

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Carol MacDonald
Signature Carol MacDonald
Date
Month Day Year 10/18/21

Sprague

Sprague Operating Resources LLC
372 Shattuck Way, Newington, NH 03801 603.431.5131

TRUCK #3051
PRODUCT OTHER

Date: ______

Truck #: 3051

Customer Name: NRC

Trailer #: ______

IN 01/18/2021 09:35:13

Address: ______

Rec'd by: ______

IN WT 37080 lb

Commodity: ______

TRUCK #3051

Remarks: ______

OUT TM 10:56:49

Carrier: ______

G 37080 lb ([illegible])
T 28440 lb
N 8640 lb

Weighmaster

NRC

1/15

NON HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Document No. U N I T I L

2. Page 1 of 1

3. Generator's Name and Mailing Address
Unitil
6 Liberty Lane West
Hampton NH 03842
Attn: Mike Dunn

4. Generator's Phone (6 0 3) 9 7 3 - 1 0 8 0

A. Non-Hazardous Manifest Document Number NHZ001 60678

B. S.G.I. (Gen. Site Address) Former MGP Site - Near 28 Gonic Road Rochester NH

5. Transporter 1 Company Name NRC East Environmental Services, Inc.

6. US EPA ID Number M A C 3 0 0 0 0 9 8 3 9 9

C. S.T.I. (Lic. Plate #)

D. Transporter's Phone 978-465-1595

7. Transporter 2 Company Name

8. US EPA ID Number

E. S.T.I. (Lic. Plate #)

F. Transporter's Phone

9. Designated Facility Name and Site Address
Tradebe Treatment & Recycling Northeast (Newington), LI
410 Shattuck Way
Newington NH 03801

10. US EPA ID Number N H D 9 8 0 5 2 1 8 4 3

G. State Facility's ID SAME

H. Facility's Phone 800-346-4626

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Non-RCRA, non-DOT (Non-haz Drilling Mud)	001	TT	1800	G ~~T~~	State NONE State NONE
b.					State State
c.					State State
d.					State State

J. Additional Descriptions for Materials Listed Above
Profile #1000297569
a.
b.
c.
d.

K. Handling Codes for Wastes Listed Above
Interim Final Interim Final
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
ER CONTACT: NRC EAST ENV. SERVICES, INC. - 24 HOURS - 800-899-4672
1)PO#: 160370-TN // REF#: 2584544 H41
Point of Departure: NRCJOB# 160370

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

Printed/Typed Name X Ryan Joe
Signature
Month Day Year 01 15 21

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature Brad Burnette
Date Month Day Year 01 15 21

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Carol MacDonald
Signature Carol MacDonald
Date Month Day Year 01 15 21

GENERATOR

TRANSPORTER

FACILITY

TRANSPORTER #1

Sprague

Sprague Operating Resources LLC
372 Shattuck Way, Newington, NH 03801 603.431.5131

Date: PRODUCT OTHER

Truck #: 3051

Customer Name: [illegible]

IN 01/13/2021 11:47:22

Trailer #:

Address:

Rec'd by:

IN WT 54140 lb

Commodity:

Remarks:

OUT TM 12:23:20

Carrier: NRC

G 54140 lb [illegible]
T 29800 lb
N 24340 lb

Weighmaster

NRC

1/13

NON HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
Manifest Document No. UNITIL
2. Page 1 of 1

3. Generator's Name and Mailing Address
Attn: Mike Dunn
Unitil
6 Liberty Lane West
Hampton NH 03842

4. Generator's Phone (6 0 3) 9 7 3 - 1 0 8 0

A. Non-Hazardous Manifest Document Number NHZ001 60677

B. S.G.I. (Gen. Site Address) Former MGP Site - Near 28 Gonic Road Rochester NH

5. Transporter 1 Company Name
NRC East Environmental Services, Inc.

6. US EPA ID Number M A C 3 0 0 0 0 9 8 3 9 0

C. S.T.I. (Lic. Plate #)

D. Transporter's Phone 978-465-1595

7. Transporter 2 Company Name

8. US EPA ID Number

E. S.T.I. (Lic. Plate #)

F. Transporter's Phone

9. Designated Facility Name and Site Address
Tradebe Treatment & Recycling Northeast (Newington), LL
410 Shattuck Way
Newington NH 03801

10. US EPA ID Number N H D 9 8 0 5 2 1 8 4 3

G. State Facility's ID SAME

H. Facility's Phone 800-346-4625

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Non-RCRA, non-DOT (Non-haz Drilling Mud)	0 0 1	T T	4	T	State NONE State NONE
b.					State State
c.					State State
d.					State State

J. Additional Descriptions for Materials Listed Above
Profile #1000297569
a.
b.
c.
d.

K. Handling Codes for Wastes Listed Above
Interim Final Interim Final
a. b.
c. d.

15. Special Handling Instructions and Additional Information
ER CONTACT: NRC EAST ENV. SERVICES, INC. - 24 HOURS - 800-899-4672
1)PO#: 160370-TN // REF#: 2584542 1-14
Point of Departure: NRC JOB# 160370

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

Printed/Typed Name X ARNOLD BROWN
Signature
Month Day Year 1 15 20

GENERATOR

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Lance T. Zechinopoulos
Signature Lance T. Zechinopoulos
Date Month Day Year 01 13 21

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

TRANSPORTER

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Carol MacDonald
Signature Carol MacDonald
Date Month Day Year 01 13 21

FACILITY

TRANSPORTER #1

Sprague

Sprague Operating Resources LLC
372 Shattuck Way, Newington, NH 03801   603.431.5131

[illegible]
PRODUCT OTHER
IN 01/13/2021 15:26:39
IN WT 39820 lb
TRUCK #3051
OUT TM 16:25:10
G [illegible]
T 28840 lb
N 10980 lb

Date:

Customer Name: TRADERC /NRC

Address:

Commodity:

Carrier: NRC /TRADERC

Truck #: 3051

Trailer #:

Rec'd by:

Remarks: Job # 160370
5,49 Ton

Weighmaster

NRC

1/12

NON HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
Manifest Document No. U N I T I L
2. Page 1 of 1

3. Generator's Name and Mailing Address
Unitil
6 Liberty Lane West
Hampton NH 03842
Attn: Mike Dunn

4. Generator's Phone (6 0 3) 9 7 3 - 1 0 8 0

A. Non-Hazardous Manifest Document Number
NHZ001 60676

B. S.G.I. (Gen. Site Address)
Former MGP Site - Near 26 Gonic Road
Rochester NH

5. Transporter 1 Company Name
NRC East Environmental Services, Inc.

6. US EPA ID Number
M A C 3 0 0 0 0 8 3 9 9

C. S.T.I. (Lic. Plate #)

D. Transporter's Phone 978-465-1595

7. Transporter 2 Company Name

8. US EPA ID Number

E. S.T.I. (Lic. Plate #)

F. Transporter's Phone

9. Designated Facility Name and Site Address
Tradebe Treatment & Recycling Northeast (Newington), Ll
410 Shattuck Way
Newington NH 03801

10. US EPA ID Number
N H D 9 8 0 5 2 1 8 4 3

G. State Facility's ID
SAME

H. Facility's Phone 800-346-4626

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Non-RCRA, non-DOT (Non-haz Drilling Mud)	0 0 1	T T	2420	G	State NONE State NONE
b.					State State
c.					State State
d.					State State

J. Additional Descriptions for Materials Listed Above
Profile #1000297569
a.
b.
c.
d.

K. Handling Codes for Wastes Listed Above

	Interim	Final		Interim	Final
a.			b.		
c.			d.		

15. Special Handling Instructions and Additional Information
ER CONTACT: NRC EAST ENV. SERVICES, INC. - 24 HOURS - 800-899-4672
1)PO#: 160370-TN // REF#: 2584537
H141
1000297569
Point of Departure:
NRC JOB# 160370

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

ARNOLD BROWN
X Printed/Typed Name
X Signature
Month Day Year 10 1 21

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name SEAN BONNETTO
Signature
Date Month Day Year 10 1 21

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Carol MacDonald
Signature Carol MacDonald
Date Month Day Year 10 12 21

GENERATOR
TRANSPORTER
FACILITY

TRANSPORTER #1

Sprague

Sprague Operating Resources LLC
372 Shattuck Way, Newington, NH 03801 603.431.5131

PRODUCT OTHER

Date:

Truck #: 3051

Customer Name: NRC / TRADEBE

Trailer #:

IN 01/12/2021 11:49:25

Address:

Rec'd by:

IN WT 52840 lb

Commodity:

Remarks:

Carrier: Tare - 30260 NRC

22580 = Net

Weighmaster

Appendix D Laboratory Reports - Soil Characterization Regulator Station Piping

ENVIRONMENTAL SOIL MANAGEMENT COMPANIES
Generator Waste Profile

ESMI Customer: NRC East Environmental Services, Inc. **Purchase Order #** 160370

Customer Address: 114 Bridge Rd **City:** Salisbury **State:** MA **Zip:** 01952

Contact: Tim Warr **Tel:** 603-770-2988 **Fax:**

Site Contact: Mark McCabe, AECOM **Tel:** 978-905-2311 **Cell:** 508-423-9018

Site Name: Unitil Former MGP Site **Site Tel:** N/A

Site Address: Route 125 **City:** Rochester **State:** NH **Zip:** 03839

History of Site Use: ☐**Residential** ☐**Commercial** ☒**Industrial** ☐**Other:**

If commercial, industrial or other, please describe history of site:
Former MGP site.

Event/process generating waste: ☐Leaking UST ☐Leaking AST ☐Surface Spill ☒other(*describe*):
Former MPG site.

Waste Material Description: ***Soil/media is contaminated with:*** (Check All That Apply)

☐ NON-HAZARDOUS ***VIRGIN PETROLEUM*** CONTAMINATED SOIL
☐#2, ☐ #4, ☐#6 Fuel Oil ☐Diesel Fuel ☐Gasoline ☐ Jet Fuel ☐Animal/Vegetable/Tall oils ☐White Oil
☐Kerosene ☐Mixed Fuels (gas/fuel oil) ☐Petroleum Solvent ☐Hydraulic Oil ☐ Motor Oil

☐ NON-HAZARDOUS ***NON-VIRGIN PETROLEUM*** CONTAMINATED SOIL
☐Used Oils ☐Grease/Lubes ☐Used Animal/Vegetable/Tall Oils ☐Waxes ☐Petrolatum ☐Hydraulic Oil
☐Lubricating Oils ☐Metal Working Oils ☐Industrial Oils ☐Used Petroleum Solvent ☐ Electrical Oil
☐Transformer Oil (non-PCB) ☐Urban Fill

☑ NON-HAZARDOUS ***COAL TAR or PCB*** CONTAMINATED SOIL
☒ Coal Tar ☐PCB's (<50ppm; Not PCB Remediation Waste)

☐ NON-HAZARDOUS ***DREDGE*** CONTAMINATED SOIL (Also Identify Contaminant)
☐Dredge Soil associated with Upland Remediation

Are there any known or suspected past releases of contaminants other than the above listed? NO ☒ **YES** ☐
If **YES**, Specify:

Approximate Tonnage: 300

Physical Characteristics: %Gravel 40 %Sand 40 %Clay/Silt 20 % H20_____ %Debris 0 ∑ =100%
Describe Debris:

I hereby certify, to the best of my knowledge, (a) I am a responsible official of the generator, (b) that the sampling requirements, pursuant to Env-Or 611.04(NH only), and any additional sampling required by the state of origin, has been adhered to, (c) that the information provided in the profile is correct and complete, (d) that the transport, treatment and recycling of the contaminated materials do not violate any laws or regulations of the state of origin.

Signature: **Date:** 12/23/2020

Typed/Printed Name: Mark McCabe **Company:** AECOM

Check One: Owner: ☐ **Generator:** ☐ **Contractor:** ☒ **Consultant:** ☐ **Other (explain):**

Acceptance of all projects is predicated on the review of this form and the analytical results of the material to be received.

ESMI of New Hampshire
67 International Drive
Loudon, New Hampshire 03307
Phone: 603.783.0228
Fax: 603.783.0104

ESMI of New York
304 Towpath Road
Fort Edward, New York 12828
Phone: 518.747.5500
Fax: 518.747.1181

Table 1
Summary of Results
Former MGP Site Rochester, NH
Principal MGP Constituents and Detections
Waste Profile Development

	Regulator Station Piping				HDD Area		
Sample Location	**Trench A**	**Trench B**	**Trench C**	**Trench D**	**HDD A**	**HDD B**	**HDD C**
Depths (below ground surface)	**0-6 ft.**	**0-6 ft.**	**0-6 ft.**	**0-6 ft.**	**5-10 ft.**	**5-10 ft.**	**5-10 ft.**
Date Collected	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**	**9/18/2020**
Volatile Organic Compounds (ug/Kg)							
Benzene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
Toluene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
Ethylbenzene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
o-Xylene	<4.34	<5.65	<3.36	<3.10	<3.16	<2.97	<3.66
m-Xylene & p-Xylene	<8.69	<11.37	<7.37	<6.21	<6.31	<5.95	<7.33
Acetone	<4.34	<56.5	<36.9	36.3	<31.6	<29.7	<36.6
Polycyclic Aromatic Hydrocarbons (ug/Kg)							
2-Methylnaphthalene	<376	<67.9	<355	96.2	73.6	<74.2	<76.9
Acenaphthylene	527	<67.9	1420	77.4	<70.1	114	<76.9
Anthracene	<376	<67.9	1100	134	91.8	247	<76.9
Benzo[a]anthracene	1050	<67.9	6,460	279	174	178	<76.9
Benzo[a]pyrene	1290	<67.9	6,640	318	192	262	<76.9
Benzo[b]fluoranthene	980	<67.9	8,170	476	311	157	<76.9
Benzo[g,h,i]perylene	1090	<67.9	9,550	508	325	185	<76.9
Benzo[k]fluoranthene	909	<67.9	3,640	188	211	122	<76.9
Chrysene	1010	<67.9	6,770	310	218	157	<76.9
Dibenz(a,h)anthracene	<376	<67.9	2450	159	111	<74.2	<76.9
Fluoranthene	848	<67.9	6,580	107	<70.1	<74.2	<76.9
Indeno[1,2,3-cd]pyrene	905	<67.9	7,620	395	267	151	<76.9
Naphthalene	<376	<67.9	<355	120	98.5	<74.2	<76.9
Phenanthrene	455	<67.9	1720	303	285	<74.2	<76.9
Pyrene	835	<67.9	6,930	109	<70.1	<74.2	<76.9
Total Petroleum Hydrocarbons (mg/Kg)							
TPH 8100	231	<13.8	1220	39.4	26.2	39.9	<15.1
Inorganic Compounds (mg/Kg)							
Arsenic	23.3	20	11.1	6.56	9.3	7.62	5.98
Barium	55.5	24	38.4	57.2	45.9	25.5	20.4
Chromium	17.7	11.1	10.1	12.3	11.7	8.84	7.03
Lead	20.1	5.13	44.2	43.9	39.2	5.21	3.36
Sulfur	184	107	318	174	158	60.9	83.8
Mercury	0.0527	<0.0312	0.087	0.0974	0.0417	<0.0367	<0.0316
Reactive Cyanide	<10	<10	<10	<10	<10	<10	<10
Reactive Sulfde	<10	<10	<10	<10	<10	<10	<10

eurofins | Environment Testing
New England

☑ Final Report
☐ Revised Report

Report Date:
29-Sep-20 15:34

Laboratory Report
SC59391

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Colin Callahan

Project: Rochester NH MGP
Project #: 60139732*2900

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Connecticut # PH-0722
Massachusetts # RI907
New Hampshire # 2240
New York # 11393
Rhode Island # LAI00368
USDA # P330-20-00109

Authorized by:

Agnes Huntley
Project Manager

Agnes R Huntley

Eurofins Environment Testing New England holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 78 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Environment Testing New England.

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Please contact the Laboratory or Technical Director at 413-789-9018 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC59391

Project: Rochester NH MGP

Project Number: 60139732*2900

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC59391-01	TrenchA_0-6	Soil	18-Sep-20 08:50	21-Sep-20 16:40
SC59391-02	TrenchB_0-6	Soil	18-Sep-20 09:10	21-Sep-20 16:40
SC59391-03	TrenchD_0-6	Soil	18-Sep-20 10:09	21-Sep-20 16:40
SC59391-04	TrenchC_0-6	Soil	18-Sep-20 09:42	21-Sep-20 16:40
SC59391-05	HDDB_5-10	Soil	18-Sep-20 11:10	21-Sep-20 16:40
SC59391-06	HDDA_5-10	Soil	18-Sep-20 10:40	21-Sep-20 16:40
SC59391-07	HDDC_5-10	Soil	18-Sep-20 11:38	21-Sep-20 16:40
SC59391-08	Trip Blank	Trip Blank	18-Sep-20 00:00	21-Sep-20 16:40

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 2.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

VOA vials preserved with deionized water were received frozen upon custody transfer to laboratory representative.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

Reactivity (40 CFR 261.23) Case Narrative:

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2) and (4); however, Eurofins Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Reactive sulfide and cyanide are tested at a pH of 2 and not tested at all conditions between pH 2 and12.5 as stated in 40 CFR 261.23, section (5); thus reactive cyanide and sulfide results as reported in this document can not be used to support the nonreactive properties of these samples.

The responsibility falls on the generator to use knowledge of the waste to determine if the waste meets or does not meet the descriptive, prose definition of reactivity.

8260 Low Level Soil:

The original analysis of sample SC59391-02(B) yeilded invalid results due to a poor purge of the sample vial. The second vial (C) was cracked upon thawing from the freezer and could not be used. A fresh sample was made (F) for the bulk soil container (D) and analyzed.

The analyte 2-Butanone (MEK) is identified as a problematic compound when purging a low level soil and failed in the initial calibration. As a result, the samples were analyzed and reported for MEK for a high level soil analysis.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010C

Spikes:

2001784-MS1 *Source: SC59391-01*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Silver

2001784-MSD1 *Source: SC59391-01*

SW846 6010C

Spikes:

2001784-MSD1 *Source: SC59391-01*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Silver

SW846 8100Mod.

Samples:

SC59391-01 *TrenchA_0-6*

The Reporting Limit has been raised to account for matrix interference.

SC59391-04 *TrenchC_0-6*

The Reporting Limit has been raised to account for matrix interference.

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

1-Chlorooctadecane

SW846 8260C LLS

Laboratory Control Samples:

2001826 BS/BSD

Acetone percent recoveries (52/52) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchC_0-6
TrenchD_0-6
Trip Blank

Chloroethane percent recoveries (513/515) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchC_0-6
TrenchD_0-6
Trip Blank

Ethanol percent recoveries (52/73) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchC_0-6
TrenchD_0-6
Trip Blank

2001826 BSD

SW846 8260C LLS

Laboratory Control Samples:

2001826 BSD

Ethanol RPD 34% (30%) is outside individual acceptance criteria.

2001826-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane
Ethanol

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

2001826-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane
Ethanol

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

2001880 BS/BSD

Acetone percent recoveries (39/50) are outside individual acceptance criteria (70-130), but within overall method allowances.
All reported results of the following samples are considered to have a potentially low bias:

TrenchB_0-6

Chloroethane percent recoveries (525/541) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

TrenchB_0-6

2001880-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

2001880-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Acetone
Chloroethane

Data for this analyte may be biased high based on QC spike recoveries.

Chloroethane

Samples:

SC59391-01 *TrenchA_0-6*

Internal standard out due to matrix interference

SW846 8260C LLS

Samples:

SC59391-03 *TrenchD_0-6*

Internal standard out due to matrix interference

Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogates with three required by program methods.

4-Bromofluorobenzene

SC59391-04 *TrenchC_0-6*

Internal standard out due to matrix interference

SC59391-05 *HDDB_5-10*

Internal standard out due to matrix interference

SC59391-06 *HDDA_5-10*

Internal standard out due to matrix interference

SC59391-07 *HDDC_5-10*

Internal standard out due to matrix interference

SW846 8270D

Laboratory Control Samples:

2001800 BS/BSD

4-Bromophenyl phenyl ether percent recoveries (20/21) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

Aniline percent recoveries (39/41) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

SW846 8270D

Laboratory Control Samples:

2001800 BS/BSD

Benzidine percent recoveries (13/13) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

Benzoic acid percent recoveries (16/19) are outside individual acceptance criteria (30-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

Pyridine percent recoveries (33/43) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

HDDA_5-10
HDDB_5-10
HDDC_5-10
TrenchA_0-6
TrenchB_0-6
TrenchC_0-6
TrenchD_0-6

2001800-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

4-Bromophenyl phenyl ether
Aniline
Benzidine
Benzoic acid
Pyridine

2001800-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

4-Bromophenyl phenyl ether
Benzidine
Benzoic acid

Duplicates:

2001800-DUP1 *Source: SC59391-01*

Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results

Phenanthrene

RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.

Benzo (k) fluoranthene

SW846 8270D

Duplicates:

2001800-DUP1	*Source: SC59391-01*

The Reporting Limit has been raised to account for matrix interference.

Samples:

SC59391-01	*TrenchA_0-6*

The Reporting Limit has been raised to account for matrix interference.

SC59391-04	*TrenchC_0-6*

The Reporting Limit has been raised to account for matrix interference.

Sample Acceptance Check Form

Client: AECOM Environment - Chelmsford, MA

Project: Rochester NH MGP / 60139732*2900

Work Order: SC59391

Sample(s) received on: 9/21/2020

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC59391-01 **Client ID:** TrenchA_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	23.3		1.84	mg/kg	SW846 6010C
Barium	55.5		1.22	mg/kg	SW846 6010C
Chromium	17.7		1.22	mg/kg	SW846 6010C
Lead	20.1		1.84	mg/kg	SW846 6010C
Sulfur	184		30.6	mg/kg	SW846 6010C
Mercury	0.0527		0.0375	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	231		30.7	mg/kg	SW846 8100Mod.
Acenaphthylene	527		376	µg/kg	SW846 8270D
Benzo (a) anthracene	1050		376	µg/kg	SW846 8270D
Benzo (a) pyrene	1290		376	µg/kg	SW846 8270D
Benzo (b) fluoranthene	980		376	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	1090		376	µg/kg	SW846 8270D
Benzo (k) fluoranthene	909		376	µg/kg	SW846 8270D
Chrysene	1010		376	µg/kg	SW846 8270D
Fluoranthene	848		376	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	905		376	µg/kg	SW846 8270D
Phenanthrene	455		376	µg/kg	SW846 8270D
Pyrene	835		376	µg/kg	SW846 8270D

Lab ID: SC59391-02 **Client ID:** TrenchB_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	20.0		1.65	mg/kg	SW846 6010C
Barium	24.0		1.10	mg/kg	SW846 6010C
Chromium	11.1		1.10	mg/kg	SW846 6010C
Lead	5.13		1.65	mg/kg	SW846 6010C
Sulfur	107		27.5	mg/kg	SW846 6010C

Lab ID: SC59391-03 **Client ID:** TrenchD_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	6.56		1.54	mg/kg	SW846 6010C
Barium	57.2		1.03	mg/kg	SW846 6010C
Chromium	12.3		1.03	mg/kg	SW846 6010C
Lead	43.9		1.54	mg/kg	SW846 6010C
Sulfur	174		25.7	mg/kg	SW846 6010C
Mercury	0.0974		0.0296	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	39.4		13.4	mg/kg	SW846 8100Mod.
Acetone	36.3		31.0	µg/kg	SW846 8260C LLS
2-Methylnaphthalene	96.2		71.0	µg/kg	SW846 8270D
Acenaphthylene	77.4		71.0	µg/kg	SW846 8270D
Anthracene	134		71.0	µg/kg	SW846 8270D
Benzo (a) anthracene	279		71.0	µg/kg	SW846 8270D
Benzo (a) pyrene	318		71.0	µg/kg	SW846 8270D
Benzo (b) fluoranthene	476		71.0	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	508		71.0	µg/kg	SW846 8270D
Benzo (k) fluoranthene	188		71.0	µg/kg	SW846 8270D
Chrysene	310		71.0	µg/kg	SW846 8270D
Dibenzo (a,h) anthracene	159		71.0	µg/kg	SW846 8270D
Fluoranthene	107		71.0	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	395		71.0	µg/kg	SW846 8270D
Naphthalene	120		71.0	µg/kg	SW846 8270D
Phenanthrene	303		71.0	µg/kg	SW846 8270D
Pyrene	109		71.0	µg/kg	SW846 8270D

Lab ID: SC59391-04 **Client ID:** TrenchC_0-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	11.1		1.72	mg/kg	SW846 6010C
Barium	38.4		1.15	mg/kg	SW846 6010C
Chromium	10.1		1.15	mg/kg	SW846 6010C
Lead	44.2		1.72	mg/kg	SW846 6010C
Sulfur	318		28.7	mg/kg	SW846 6010C
Mercury	0.0870		0.0306	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	1220		27.3	mg/kg	SW846 8100Mod.
Acenaphthylene	1420		355	µg/kg	SW846 8270D
Anthracene	1100		355	µg/kg	SW846 8270D
Benzo (a) anthracene	6460		355	µg/kg	SW846 8270D
Benzo (a) pyrene	6640		355	µg/kg	SW846 8270D
Benzo (b) fluoranthene	8170		355	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	9550		355	µg/kg	SW846 8270D
Benzo (k) fluoranthene	3640		355	µg/kg	SW846 8270D
Chrysene	6770		355	µg/kg	SW846 8270D
Dibenzo (a,h) anthracene	2450		355	µg/kg	SW846 8270D
Fluoranthene	6580		355	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	7620		355	µg/kg	SW846 8270D
Phenanthrene	1720		355	µg/kg	SW846 8270D
Pyrene	6930		355	µg/kg	SW846 8270D

Lab ID: SC59391-05 **Client ID:** HDDB_5-10

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	7.62		1.79	mg/kg	SW846 6010C
Barium	25.5		1.19	mg/kg	SW846 6010C
Chromium	8.84		1.19	mg/kg	SW846 6010C
Lead	5.21		1.79	mg/kg	SW846 6010C
Sulfur	60.9		29.8	mg/kg	SW846 6010C
Total Petroleum Hydrocarbons	39.9		14.7	mg/kg	SW846 8100Mod.
Acenaphthylene	114		74.2	µg/kg	SW846 8270D
Anthracene	247		74.2	µg/kg	SW846 8270D
Benzo (a) anthracene	178		74.2	µg/kg	SW846 8270D
Benzo (a) pyrene	262		74.2	µg/kg	SW846 8270D
Benzo (b) fluoranthene	157		74.2	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	185		74.2	µg/kg	SW846 8270D
Benzo (k) fluoranthene	122		74.2	µg/kg	SW846 8270D
Chrysene	157		74.2	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	151		74.2	µg/kg	SW846 8270D

Lab ID: SC59391-06 **Client ID:** HDDA_5-10

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	9.30		1.66	mg/kg	SW846 6010C
Barium	45.9		1.11	mg/kg	SW846 6010C
Chromium	11.7		1.11	mg/kg	SW846 6010C
Lead	39.2		1.66	mg/kg	SW846 6010C
Sulfur	158		27.7	mg/kg	SW846 6010C
Mercury	0.0417		0.0310	mg/kg	SW846 7471B
Total Petroleum Hydrocarbons	26.2		13.7	mg/kg	SW846 8100Mod.
2-Methylnaphthalene	73.6		70.1	µg/kg	SW846 8270D
Anthracene	91.8		70.1	µg/kg	SW846 8270D
Benzo (a) anthracene	174		70.1	µg/kg	SW846 8270D
Benzo (a) pyrene	192		70.1	µg/kg	SW846 8270D
Benzo (b) fluoranthene	311		70.1	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	325		70.1	µg/kg	SW846 8270D
Benzo (k) fluoranthene	211		70.1	µg/kg	SW846 8270D
Chrysene	218		70.1	µg/kg	SW846 8270D
Dibenzo (a,h) anthracene	111		70.1	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	267		70.1	µg/kg	SW846 8270D
Naphthalene	98.5		70.1	µg/kg	SW846 8270D
Phenanthrene	285		70.1	µg/kg	SW846 8270D

Lab ID: SC59391-07 **Client ID:** HDDC_5-10

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	5.98		1.95	mg/kg	SW846 6010C
Barium	20.4		1.30	mg/kg	SW846 6010C
Chromium	7.03		1.30	mg/kg	SW846 6010C
Lead	3.36		1.95	mg/kg	SW846 6010C
Sulfur	83.8		32.4	mg/kg	SW846 6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)							Initial weight: 22.23 g						
78-93-3	2-Butanone (MEK)	< 93.9	D	µg/kg dry	93.9	21.4	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*111*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*110*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260			IS1										
Prepared by method SW846 5035A Soil (low level)							Initial weight: 6.66 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 4.34		µg/kg dry	4.34	2.83	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 43.4		µg/kg dry	43.4	9.73	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 4.34		µg/kg dry	4.34	2.61	1	"	"	"	"	"	X
71-43-2	Benzene	< 4.34		µg/kg dry	4.34	2.90	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 4.34		µg/kg dry	4.34	2.89	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 4.34		µg/kg dry	4.34	2.47	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 4.34		µg/kg dry	4.34	3.19	1	"	"	"	"	"	X
75-25-2	Bromoform	< 4.34		µg/kg dry	4.34	3.32	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 8.69		µg/kg dry	8.69	1.42	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 8.69		µg/kg dry	8.69	4.66	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 4.34		µg/kg dry	4.34	3.50	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 4.34		µg/kg dry	4.34	3.42	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 8.69		µg/kg dry	8.69	3.05	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 4.34		µg/kg dry	4.34	2.74	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 4.34		µg/kg dry	4.34	3.18	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 8.69		µg/kg dry	8.69	3.19	1	"	"	"	"	"	X
67-66-3	Chloroform	< 4.34		µg/kg dry	4.34	2.92	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 8.69		µg/kg dry	8.69	3.34	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 4.34		µg/kg dry	4.34	3.46	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 4.34		µg/kg dry	4.34	3.77	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 8.69		µg/kg dry	8.69	3.68	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 4.34		µg/kg dry	4.34	2.88	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 4.34		µg/kg dry	4.34	3.12	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 4.34		µg/kg dry	4.34	2.55	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 4.34		µg/kg dry	4.34	4.03	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 4.34		µg/kg dry	4.34	3.48	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 4.34		µg/kg dry	4.34	4.12	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 8.69		µg/kg dry	8.69	2.33	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 4.34		µg/kg dry	4.34	2.95	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 4.34		µg/kg dry	4.34	2.93	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 4.34		µg/kg dry	4.34	2.66	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 4.34		µg/kg dry	4.34	2.51	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 4.34		µg/kg dry	4.34	2.70	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 4.34		µg/kg dry	4.34	2.88	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 4.34		µg/kg dry	4.34	3.32	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 6.66 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
594-20-7	2,2-Dichloropropane	< 4.34		µg/kg dry	4.34	3.00	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 4.34		µg/kg dry	4.34	2.95	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 4.34		µg/kg dry	4.34	2.83	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 4.34		µg/kg dry	4.34	3.30	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 4.34		µg/kg dry	4.34	3.10	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 8.69		µg/kg dry	8.69	4.37	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 8.69		µg/kg dry	8.69	2.55	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 4.34		µg/kg dry	4.34	3.28	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 4.34		µg/kg dry	4.34	4.27	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 4.34		µg/kg dry	4.34	2.41	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 8.69		µg/kg dry	8.69	2.81	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 8.69		µg/kg dry	8.69	2.33	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 4.34		µg/kg dry	4.34	3.93	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 4.34		µg/kg dry	4.34	3.68	1	"	"	"	"	"	X
100-42-5	Styrene	< 4.34		µg/kg dry	4.34	3.36	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 4.34		µg/kg dry	4.34	3.26	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 4.34		µg/kg dry	4.34	3.98	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 4.34		µg/kg dry	4.34	2.42	1	"	"	"	"	"	X
108-88-3	Toluene	< 4.34		µg/kg dry	4.34	2.75	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 4.34		µg/kg dry	4.34	3.67	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 4.34		µg/kg dry	4.34	4.01	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 4.34		µg/kg dry	4.34	4.13	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 4.34		µg/kg dry	4.34	2.96	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 4.34		µg/kg dry	4.34	3.28	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 4.34		µg/kg dry	4.34	2.92	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 4.34		µg/kg dry	4.34	3.32	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 4.34		µg/kg dry	4.34	3.82	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 4.34		µg/kg dry	4.34	3.68	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 4.34		µg/kg dry	4.34	3.69	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 4.34		µg/kg dry	4.34	2.65	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 8.69		µg/kg dry	8.69	5.94	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 4.34		µg/kg dry	4.34	3.17	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 8.69		µg/kg dry	8.69	2.20	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 4.34		µg/kg dry	4.34	2.29	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 4.34		µg/kg dry	4.34	3.43	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 4.34		µg/kg dry	4.34	2.86	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 4.34		µg/kg dry	4.34	3.10	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 86.9		µg/kg dry	86.9	23.3	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 86.9		µg/kg dry	86.9	27.0	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 21.7		µg/kg dry	21.7	3.21	1	"	"	"	"	"	X
64-17-5	Ethanol	< 869		µg/kg dry	869	53.9	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
							Initial weight: 6.66 g						
460-00-4	*4-Bromofluorobenzene*	*89*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*109*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546			R01										
83-32-9	Acenaphthene	< 376		µg/kg dry	376	200	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**527**		µg/kg dry	376	196	1	"	"	"	"	"	X
62-53-3	Aniline	< 1860		µg/kg dry	1860	119	1	"	"	"	"	"	X
120-12-7	Anthracene	< 376		µg/kg dry	376	217	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 1860		µg/kg dry	1860	202	1	"	"	"	"	"	
92-87-5	Benzidine	< 3720		µg/kg dry	3720	119	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**1,050**		µg/kg dry	376	212	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**1,290**		µg/kg dry	376	257	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**980**		µg/kg dry	376	283	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**1,090**		µg/kg dry	376	266	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**909**		µg/kg dry	376	322	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 1860		µg/kg dry	1860	112	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 1860		µg/kg dry	1860	431	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 1860		µg/kg dry	1860	188	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 943		µg/kg dry	943	174	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 943		µg/kg dry	943	151	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 943		µg/kg dry	943	240	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 1860		µg/kg dry	1860	211	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 1860		µg/kg dry	1860	187	1	"	"	"	"	"	X
86-74-8	Carbazole	< 943		µg/kg dry	943	217	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 1860		µg/kg dry	1860	219	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 943		µg/kg dry	943	116	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 1860		µg/kg dry	1860	255	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 943		µg/kg dry	943	181	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 1860		µg/kg dry	1860	182	1	"	"	"	"	"	X
218-01-9	Chrysene	**1,010**		µg/kg dry	376	213	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 376		µg/kg dry	376	278	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 943		µg/kg dry	943	253	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1860		µg/kg dry	1860	222	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1860		µg/kg dry	1860	201	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1860		µg/kg dry	1860	212	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 1860		µg/kg dry	1860	206	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 943		µg/kg dry	943	229	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 1860		µg/kg dry	1860	195	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
131-11-3	Dimethyl phthalate	< 1860		µg/kg dry	1860	209	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 1860		µg/kg dry	1860	147	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 1860		µg/kg dry	1860	199	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 1860		µg/kg dry	1860	267	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 1860		µg/kg dry	1860	193	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 943		µg/kg dry	943	226	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 943		µg/kg dry	943	192	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 1860		µg/kg dry	1860	277	1	"	"	"	"	"	X
206-44-0	Fluoranthene	**848**		µg/kg dry	376	221	1	"	"	"	"	"	X
86-73-7	Fluorene	< 376		µg/kg dry	376	243	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 943		µg/kg dry	943	237	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 943		µg/kg dry	943	237	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 943		µg/kg dry	943	238	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 943		µg/kg dry	943	213	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**905**		µg/kg dry	376	257	1	"	"	"	"	"	X
78-59-1	Isophorone	< 943		µg/kg dry	943	145	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 376		µg/kg dry	376	264	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 1860		µg/kg dry	1860	150	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 1860		µg/kg dry	1860	146	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 376		µg/kg dry	376	217	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 1860		µg/kg dry	1860	169	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 1860		µg/kg dry	1860	172	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 943		µg/kg dry	943	248	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 943		µg/kg dry	943	218	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 943		µg/kg dry	943	165	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 7450		µg/kg dry	7450	248	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 943		µg/kg dry	943	123	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 943		µg/kg dry	943	165	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 1860		µg/kg dry	1860	190	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 1860		µg/kg dry	1860	222	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**455**		µg/kg dry	376	213	1	"	"	"	"	"	X
108-95-2	Phenol	< 1860		µg/kg dry	1860	189	1	"	"	"	"	"	X
129-00-0	Pyrene	**835**		µg/kg dry	376	208	1	"	"	"	"	"	X
110-86-1	Pyridine	< 1860		µg/kg dry	1860	441	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1860		µg/kg dry	1860	229	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 376		µg/kg dry	376	208	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 1860		µg/kg dry	1860	192	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 943		µg/kg dry	943	230	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 1860		µg/kg dry	1860	198	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 1860		µg/kg dry	1860	222	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*64*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*93*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchA_0-6 SC59391-01	60139732*2900	Soil	18-Sep-20 08:50	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
4165-60-0	*Nitrobenzene-d5*	*88*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*86*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*72*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*72*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546			R01										
	Total Petroleum Hydrocarbons	**231**		mg/kg dry	30.7	25.6	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*77*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*101*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.67		mg/kg dry	3.67	0.198	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**23.3**		mg/kg dry	1.84	0.233	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**55.5**		mg/kg dry	1.22	0.144	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.612		mg/kg dry	0.612	0.0317	1	"	"	"	"	"	X
7440-47-3	Chromium	**17.7**		mg/kg dry	1.22	0.163	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0527**		mg/kg dry	0.0375	0.0104	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**20.1**		mg/kg dry	1.84	0.259	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.84		mg/kg dry	1.84	0.350	1	"	"	"	"	"	X
7704-34-9	Sulfur	**184**		mg/kg dry	30.6	2.10	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**86.4**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:36	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level) — Initial weight: 27.33 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
78-93-3	2-Butanone (MEK)	< 60.3	D	µg/kg dry	60.3	13.8	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X

Surrogate recoveries:

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
460-00-4	*4-Bromofluorobenzene*	*94*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*115*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (low level) — Initial weight: 4.58 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.65		µg/kg dry	5.65	3.68	1	SW846 8260C LLS	28-Sep-20	29-Sep-20	MED	2001880	X
67-64-1	Acetone	< 56.5		µg/kg dry	56.5	12.7	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 5.65		µg/kg dry	5.65	3.39	1	"	"	"	"	"	X
71-43-2	Benzene	< 5.65		µg/kg dry	5.65	3.77	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 5.65		µg/kg dry	5.65	3.76	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 5.65		µg/kg dry	5.65	3.21	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 5.65		µg/kg dry	5.65	4.15	1	"	"	"	"	"	X
75-25-2	Bromoform	< 5.65		µg/kg dry	5.65	4.32	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 11.3		µg/kg dry	11.3	1.84	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 11.3		µg/kg dry	11.3	6.06	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 5.65		µg/kg dry	5.65	4.55	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 5.65		µg/kg dry	5.65	4.45	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 11.3		µg/kg dry	11.3	3.97	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.65		µg/kg dry	5.65	3.56	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.65		µg/kg dry	5.65	4.14	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 11.3		µg/kg dry	11.3	4.15	1	"	"	"	"	"	X
67-66-3	Chloroform	< 5.65		µg/kg dry	5.65	3.80	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 11.3		µg/kg dry	11.3	4.34	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 5.65		µg/kg dry	5.65	4.50	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 5.65		µg/kg dry	5.65	4.90	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 11.3		µg/kg dry	11.3	4.79	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 5.65		µg/kg dry	5.65	3.74	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 5.65		µg/kg dry	5.65	4.06	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 5.65		µg/kg dry	5.65	3.32	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.65		µg/kg dry	5.65	5.24	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.65		µg/kg dry	5.65	4.53	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.65		µg/kg dry	5.65	5.36	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 11.3		µg/kg dry	11.3	3.03	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.65		µg/kg dry	5.65	3.83	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.65		µg/kg dry	5.65	3.81	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.65		µg/kg dry	5.65	3.46	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 5.65		µg/kg dry	5.65	3.27	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 5.65		µg/kg dry	5.65	3.51	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.65		µg/kg dry	5.65	3.74	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 5.65		µg/kg dry	5.65	4.32	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Initial weight: 4.58 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 5.65		µg/kg dry	5.65	3.90	1	SW846 8260C LLS	28-Sep-20	29-Sep-20	MED	2001880	X
563-58-6	1,1-Dichloropropene	< 5.65		µg/kg dry	5.65	3.84	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 5.65		µg/kg dry	5.65	3.68	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 5.65		µg/kg dry	5.65	4.29	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.65		µg/kg dry	5.65	4.03	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 11.3		µg/kg dry	11.3	5.68	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 11.3		µg/kg dry	11.3	3.32	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.65		µg/kg dry	5.65	4.27	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 5.65		µg/kg dry	5.65	5.55	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 5.65		µg/kg dry	5.65	3.13	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 11.3		µg/kg dry	11.3	3.65	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 11.3		µg/kg dry	11.3	3.03	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.65		µg/kg dry	5.65	5.11	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 5.65		µg/kg dry	5.65	4.78	1	"	"	"	"	"	X
100-42-5	Styrene	< 5.65		µg/kg dry	5.65	4.37	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 5.65		µg/kg dry	5.65	4.24	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.65		µg/kg dry	5.65	5.18	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 5.65		µg/kg dry	5.65	3.14	1	"	"	"	"	"	X
108-88-3	Toluene	< 5.65		µg/kg dry	5.65	3.58	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 5.65		µg/kg dry	5.65	4.77	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.65		µg/kg dry	5.65	5.21	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 5.65		µg/kg dry	5.65	5.37	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 5.65		µg/kg dry	5.65	3.85	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.65		µg/kg dry	5.65	4.26	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 5.65		µg/kg dry	5.65	3.80	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 5.65		µg/kg dry	5.65	4.32	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 5.65		µg/kg dry	5.65	4.97	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 5.65		µg/kg dry	5.65	4.78	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 5.65		µg/kg dry	5.65	4.80	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 5.65		µg/kg dry	5.65	3.45	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 11.3		µg/kg dry	11.3	7.72	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 5.65		µg/kg dry	5.65	4.12	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 11.3		µg/kg dry	11.3	2.86	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5.65		µg/kg dry	5.65	2.97	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 5.65		µg/kg dry	5.65	4.46	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 5.65		µg/kg dry	5.65	3.72	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 5.65		µg/kg dry	5.65	4.03	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 113		µg/kg dry	113	30.3	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 113		µg/kg dry	113	35.1	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 28.3		µg/kg dry	28.3	4.17	1	"	"	"	"	"	X
64-17-5	Ethanol	< 1130		µg/kg dry	1130	70.1	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Initial weight: 4.58 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
460-00-4	*4-Bromofluorobenzene*	*93*			*70-130 %*			SW846 8260C LLS	28-Sep-20	29-Sep-20	MED	2001880	
2037-26-5	*Toluene-d8*	*103*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds
Prepared by method SW846 3546

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
83-32-9	Acenaphthene	< 67.9		µg/kg dry	67.9	36.0	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	< 67.9		µg/kg dry	67.9	35.4	1	"	"	"	"	"	X
62-53-3	Aniline	< 336		µg/kg dry	336	21.4	1	"	"	"	"	"	X
120-12-7	Anthracene	< 67.9		µg/kg dry	67.9	39.1	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 336		µg/kg dry	336	36.4	1	"	"	"	"	"	
92-87-5	Benzidine	< 672		µg/kg dry	672	21.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 67.9		µg/kg dry	67.9	38.2	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 67.9		µg/kg dry	67.9	46.4	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 67.9		µg/kg dry	67.9	51.1	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 67.9		µg/kg dry	67.9	47.9	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 67.9		µg/kg dry	67.9	58.0	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 336		µg/kg dry	336	20.1	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 336		µg/kg dry	336	77.7	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 336		µg/kg dry	336	33.9	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 170		µg/kg dry	170	31.4	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 170		µg/kg dry	170	27.3	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 170		µg/kg dry	170	43.2	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 336		µg/kg dry	336	38.0	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 336		µg/kg dry	336	33.7	1	"	"	"	"	"	X
86-74-8	Carbazole	< 170		µg/kg dry	170	39.1	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 336		µg/kg dry	336	39.5	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 170		µg/kg dry	170	21.0	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 336		µg/kg dry	336	46.0	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 170		µg/kg dry	170	32.6	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 336		µg/kg dry	336	32.9	1	"	"	"	"	"	X
218-01-9	Chrysene	< 67.9		µg/kg dry	67.9	38.4	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 67.9		µg/kg dry	67.9	50.2	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 170		µg/kg dry	170	45.7	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 336		µg/kg dry	336	40.1	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 336		µg/kg dry	336	36.2	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 336		µg/kg dry	336	38.2	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 336		µg/kg dry	336	37.1	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 170		µg/kg dry	170	41.2	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 336		µg/kg dry	336	35.2	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
131-11-3	Dimethyl phthalate	< 336		µg/kg dry	336	37.7	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 336		µg/kg dry	336	26.6	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 336		µg/kg dry	336	35.9	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 336		µg/kg dry	336	48.1	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 336		µg/kg dry	336	34.8	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 170		µg/kg dry	170	40.7	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 170		µg/kg dry	170	34.7	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 336		µg/kg dry	336	50.0	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 67.9		µg/kg dry	67.9	39.8	1	"	"	"	"	"	X
86-73-7	Fluorene	< 67.9		µg/kg dry	67.9	43.9	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 170		µg/kg dry	170	42.7	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 170		µg/kg dry	170	42.7	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 170		µg/kg dry	170	42.8	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 170		µg/kg dry	170	38.4	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 67.9		µg/kg dry	67.9	46.4	1	"	"	"	"	"	X
78-59-1	Isophorone	< 170		µg/kg dry	170	26.1	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 67.9		µg/kg dry	67.9	47.5	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 336		µg/kg dry	336	27.0	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 336		µg/kg dry	336	26.4	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 67.9		µg/kg dry	67.9	39.2	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 336		µg/kg dry	336	30.4	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 336		µg/kg dry	336	31.0	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 170		µg/kg dry	170	44.8	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 170		µg/kg dry	170	39.3	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 170		µg/kg dry	170	29.7	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1340		µg/kg dry	1340	44.7	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 170		µg/kg dry	170	22.2	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 170		µg/kg dry	170	29.7	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 336		µg/kg dry	336	34.2	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 336		µg/kg dry	336	40.0	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 67.9		µg/kg dry	67.9	38.5	1	"	"	"	"	"	X
108-95-2	Phenol	< 336		µg/kg dry	336	34.0	1	"	"	"	"	"	X
129-00-0	Pyrene	< 67.9		µg/kg dry	67.9	37.4	1	"	"	"	"	"	X
110-86-1	Pyridine	< 336		µg/kg dry	336	79.5	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 336		µg/kg dry	336	41.3	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 67.9		µg/kg dry	67.9	37.4	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 336		µg/kg dry	336	34.7	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 170		µg/kg dry	170	41.5	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 336		µg/kg dry	336	35.7	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 336		µg/kg dry	336	40.0	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*41*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*66*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchB_0-6 SC59391-02	60139732*2900	Soil	18-Sep-20 09:10	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
4165-60-0	*Nitrobenzene-d5*	*57*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*64*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*70*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*73*			*30-130 %*			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Fingerprinting by GC

Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Total Petroleum Hydrocarbons	< 13.8		mg/kg dry	13.8	11.5	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*70*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*81*			*40-140 %*			"	"	"	"	"	

Total Metals by EPA 6000/7000 Series Methods

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7440-22-4	Silver	< 3.30		mg/kg dry	3.30	0.178	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**20.0**		mg/kg dry	1.65	0.209	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**24.0**		mg/kg dry	1.10	0.130	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.550		mg/kg dry	0.550	0.0285	1	"	"	"	"	"	X
7440-47-3	Chromium	**11.1**		mg/kg dry	1.10	0.146	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.0312		mg/kg dry	0.0312	0.0087	1	SW846 7471B	"	29-Sep-20	edt	2001785	X

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7439-92-1	Lead	**5.13**		mg/kg dry	1.65	0.233	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.65		mg/kg dry	1.65	0.315	1	"	"	"	"	"	X
7704-34-9	Sulfur	**107**		mg/kg dry	27.5	1.88	1	"	"	23-Sep-20	"	"	

General Chemistry Parameters

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	% Solids	**96.6**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	

Subcontracted Analyses

Prepared by method 7.3.3

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:37	2337	551420	

Prepared by method 7.3.4

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (high level)						Initial weight: 27.79 g							
78-93-3	2-Butanone (MEK)	< 64.8	D	µg/kg dry	64.8	14.8	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260			IS1										
Prepared by method SW846 5035A Soil (low level)						Initial weight: 8.62 g							
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.10		µg/kg dry	3.10	2.02	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	**36.3**		µg/kg dry	31.0	6.95	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.10		µg/kg dry	3.10	1.86	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.10		µg/kg dry	3.10	2.07	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.10		µg/kg dry	3.10	2.07	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.10		µg/kg dry	3.10	1.76	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.10		µg/kg dry	3.10	2.28	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.10		µg/kg dry	3.10	2.37	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 6.21		µg/kg dry	6.21	1.01	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 6.21		µg/kg dry	6.21	3.33	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.10		µg/kg dry	3.10	2.50	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.10		µg/kg dry	3.10	2.45	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 6.21		µg/kg dry	6.21	2.18	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.10		µg/kg dry	3.10	1.96	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.10		µg/kg dry	3.10	2.27	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 6.21		µg/kg dry	6.21	2.28	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.10		µg/kg dry	3.10	2.09	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 6.21		µg/kg dry	6.21	2.38	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.10		µg/kg dry	3.10	2.47	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.10		µg/kg dry	3.10	2.69	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 6.21		µg/kg dry	6.21	2.63	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.10		µg/kg dry	3.10	2.06	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.10		µg/kg dry	3.10	2.23	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.10		µg/kg dry	3.10	1.83	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.10		µg/kg dry	3.10	2.88	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.10		µg/kg dry	3.10	2.49	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.10		µg/kg dry	3.10	2.94	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 6.21		µg/kg dry	6.21	1.66	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.10		µg/kg dry	3.10	2.10	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.10		µg/kg dry	3.10	2.09	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.10		µg/kg dry	3.10	1.90	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.10		µg/kg dry	3.10	1.79	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.10		µg/kg dry	3.10	1.93	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.10		µg/kg dry	3.10	2.06	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.10		µg/kg dry	3.10	2.37	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.62 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
594-20-7	2,2-Dichloropropane	< 3.10		µg/kg dry	3.10	2.14	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.10		µg/kg dry	3.10	2.11	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.10		µg/kg dry	3.10	2.02	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.10		µg/kg dry	3.10	2.36	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.10		µg/kg dry	3.10	2.22	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 6.21		µg/kg dry	6.21	3.12	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 6.21		µg/kg dry	6.21	1.83	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.10		µg/kg dry	3.10	2.35	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.10		µg/kg dry	3.10	3.05	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.10		µg/kg dry	3.10	1.72	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 6.21		µg/kg dry	6.21	2.01	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 6.21		µg/kg dry	6.21	1.66	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.10		µg/kg dry	3.10	2.81	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.10		µg/kg dry	3.10	2.63	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.10		µg/kg dry	3.10	2.40	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.10		µg/kg dry	3.10	2.33	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.10		µg/kg dry	3.10	2.84	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.10		µg/kg dry	3.10	1.73	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.10		µg/kg dry	3.10	1.97	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.10		µg/kg dry	3.10	2.62	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.10		µg/kg dry	3.10	2.86	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.10		µg/kg dry	3.10	2.95	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.10		µg/kg dry	3.10	2.12	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.10		µg/kg dry	3.10	2.34	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.10		µg/kg dry	3.10	2.09	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.10		µg/kg dry	3.10	2.37	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.10		µg/kg dry	3.10	2.73	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.10		µg/kg dry	3.10	2.63	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.10		µg/kg dry	3.10	2.64	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.10		µg/kg dry	3.10	1.89	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 6.21		µg/kg dry	6.21	4.24	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.10		µg/kg dry	3.10	2.27	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 6.21		µg/kg dry	6.21	1.57	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.10		µg/kg dry	3.10	1.63	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.10		µg/kg dry	3.10	2.45	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.10		µg/kg dry	3.10	2.04	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.10		µg/kg dry	3.10	2.22	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 62.1		µg/kg dry	62.1	16.6	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 62.1		µg/kg dry	62.1	19.3	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 15.5		µg/kg dry	15.5	2.29	1	"	"	"	"	"	X
64-17-5	Ethanol	< 621		µg/kg dry	621	38.5	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.62 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
460-00-4	*4-Bromofluorobenzene*	*67*	SGCMS VOC		*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*92*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*114*			*70-130 %*			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
83-32-9	Acenaphthene	< 71.0		µg/kg dry	71.0	37.7	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**77.4**		µg/kg dry	71.0	37.1	1	"	"	"	"	"	X
62-53-3	Aniline	< 351		µg/kg dry	351	22.4	1	"	"	"	"	"	X
120-12-7	Anthracene	**134**		µg/kg dry	71.0	40.9	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 351		µg/kg dry	351	38.1	1	"	"	"	"	"	
92-87-5	Benzidine	< 703		µg/kg dry	703	22.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**279**		µg/kg dry	71.0	39.9	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**318**		µg/kg dry	71.0	48.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**476**		µg/kg dry	71.0	53.5	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**508**		µg/kg dry	71.0	50.2	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**188**		µg/kg dry	71.0	60.7	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 351		µg/kg dry	351	21.1	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 351		µg/kg dry	351	81.3	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 351		µg/kg dry	351	35.5	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 178		µg/kg dry	178	32.9	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 178		µg/kg dry	178	28.5	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 178		µg/kg dry	178	45.3	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 351		µg/kg dry	351	39.7	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 351		µg/kg dry	351	35.2	1	"	"	"	"	"	X
86-74-8	Carbazole	< 178		µg/kg dry	178	40.9	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 351		µg/kg dry	351	41.3	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 178		µg/kg dry	178	21.9	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 351		µg/kg dry	351	48.1	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 178		µg/kg dry	178	34.1	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 351		µg/kg dry	351	34.4	1	"	"	"	"	"	X
218-01-9	Chrysene	**310**		µg/kg dry	71.0	40.1	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	**159**		µg/kg dry	71.0	52.5	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 178		µg/kg dry	178	47.8	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 351		µg/kg dry	351	42.0	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 351		µg/kg dry	351	37.9	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 351		µg/kg dry	351	39.9	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 351		µg/kg dry	351	38.9	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 178		µg/kg dry	178	43.1	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 351		µg/kg dry	351	36.8	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
131-11-3	Dimethyl phthalate	< 351		µg/kg dry	351	39.5	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 351		µg/kg dry	351	27.8	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 351		µg/kg dry	351	37.6	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 351		µg/kg dry	351	50.4	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 351		µg/kg dry	351	36.4	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 178		µg/kg dry	178	42.6	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 178		µg/kg dry	178	36.3	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 351		µg/kg dry	351	52.3	1	"	"	"	"	"	X
206-44-0	Fluoranthene	**107**		µg/kg dry	71.0	41.6	1	"	"	"	"	"	X
86-73-7	Fluorene	< 71.0		µg/kg dry	71.0	45.9	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 178		µg/kg dry	178	44.7	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 178		µg/kg dry	178	44.7	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 178		µg/kg dry	178	44.8	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 178		µg/kg dry	178	40.1	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**395**		µg/kg dry	71.0	48.6	1	"	"	"	"	"	X
78-59-1	Isophorone	< 178		µg/kg dry	178	27.4	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	**96.2**		µg/kg dry	71.0	49.7	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 351		µg/kg dry	351	28.2	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 351		µg/kg dry	351	27.6	1	"	"	"	"	"	X
91-20-3	Naphthalene	**120**		µg/kg dry	71.0	41.0	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 351		µg/kg dry	351	31.8	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 351		µg/kg dry	351	32.5	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 178		µg/kg dry	178	46.8	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 178		µg/kg dry	178	41.1	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 178		µg/kg dry	178	31.1	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1410		µg/kg dry	1410	46.7	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 178		µg/kg dry	178	23.2	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 178		µg/kg dry	178	31.1	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 351		µg/kg dry	351	35.8	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 351		µg/kg dry	351	41.8	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**303**		µg/kg dry	71.0	40.2	1	"	"	"	"	"	X
108-95-2	Phenol	< 351		µg/kg dry	351	35.6	1	"	"	"	"	"	X
129-00-0	Pyrene	**109**		µg/kg dry	71.0	39.2	1	"	"	"	"	"	X
110-86-1	Pyridine	< 351		µg/kg dry	351	83.2	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 351		µg/kg dry	351	43.2	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 71.0		µg/kg dry	71.0	39.2	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 351		µg/kg dry	351	36.3	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 178		µg/kg dry	178	43.4	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 351		µg/kg dry	351	37.4	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 351		µg/kg dry	351	41.8	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*52*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchD_0-6 SC59391-03	60139732*2900	Soil	18-Sep-20 10:09	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
4165-60-0	*Nitrobenzene-d5*	*73*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*85*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*73*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*68*			*30-130 %*			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Fingerprinting by GC

Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Total Petroleum Hydrocarbons	**39.4**		mg/kg dry	13.4	11.2	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*73*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*85*			*40-140 %*			"	"	"	"	"	

Total Metals by EPA 6000/7000 Series Methods

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7440-22-4	Silver	< 3.08		mg/kg dry	3.08	0.167	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**6.56**		mg/kg dry	1.54	0.195	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**57.2**		mg/kg dry	1.03	0.121	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.514		mg/kg dry	0.514	0.0266	1	"	"	"	"	"	X
7440-47-3	Chromium	**12.3**		mg/kg dry	1.03	0.137	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0974**		mg/kg dry	0.0296	0.0082	1	SW846 7471B	"	29-Sep-20	edt	2001785	X

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7439-92-1	Lead	**43.9**		mg/kg dry	1.54	0.218	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.54		mg/kg dry	1.54	0.294	1	"	"	"	"	"	X
7704-34-9	Sulfur	**174**		mg/kg dry	25.7	1.76	1	"	"	23-Sep-20	"	"	

General Chemistry Parameters

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	% Solids	**93.4**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	

Subcontracted Analyses

Prepared by method 7.3.3

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:40	2337	551420	

Prepared by method 7.3.4

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level) Initial weight: 27.16 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
78-93-3	2-Butanone (MEK)	< 65.7	D	µg/kg dry	65.7	15.0	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X

Surrogate recoveries:

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*112*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260 IS1

Prepared by method SW846 5035A Soil (low level) Initial weight: 7.24 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.69		µg/kg dry	3.69	2.40	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 36.9		µg/kg dry	36.9	8.26	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.69		µg/kg dry	3.69	2.21	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.69		µg/kg dry	3.69	2.46	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.69		µg/kg dry	3.69	2.45	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.69		µg/kg dry	3.69	2.09	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.69		µg/kg dry	3.69	2.71	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.69		µg/kg dry	3.69	2.82	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 7.37		µg/kg dry	7.37	1.20	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 7.37		µg/kg dry	7.37	3.95	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.69		µg/kg dry	3.69	2.97	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.69		µg/kg dry	3.69	2.90	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 7.37		µg/kg dry	7.37	2.59	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.69		µg/kg dry	3.69	2.32	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.69		µg/kg dry	3.69	2.70	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 7.37		µg/kg dry	7.37	2.71	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.69		µg/kg dry	3.69	2.48	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 7.37		µg/kg dry	7.37	2.83	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.69		µg/kg dry	3.69	2.93	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.69		µg/kg dry	3.69	3.20	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 7.37		µg/kg dry	7.37	3.13	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.69		µg/kg dry	3.69	2.44	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.69		µg/kg dry	3.69	2.65	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.69		µg/kg dry	3.69	2.17	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.69		µg/kg dry	3.69	3.42	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.69		µg/kg dry	3.69	2.96	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.69		µg/kg dry	3.69	3.49	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 7.37		µg/kg dry	7.37	1.98	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.69		µg/kg dry	3.69	2.50	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.69		µg/kg dry	3.69	2.48	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.69		µg/kg dry	3.69	2.26	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.69		µg/kg dry	3.69	2.13	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.69		µg/kg dry	3.69	2.29	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.69		µg/kg dry	3.69	2.44	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.69		µg/kg dry	3.69	2.82	1	"	"	"	"	"	X

Sample Identification
TrenchC_0-6
SC59391-04

Client Project #	Matrix	Collection Date/Time	Received
60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 7.24 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 3.69		µg/kg dry	3.69	2.54	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.69		µg/kg dry	3.69	2.51	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.69		µg/kg dry	3.69	2.40	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.69		µg/kg dry	3.69	2.80	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.69		µg/kg dry	3.69	2.63	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 7.37		µg/kg dry	7.37	3.71	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 7.37		µg/kg dry	7.37	2.17	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.69		µg/kg dry	3.69	2.79	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.69		µg/kg dry	3.69	3.62	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.69		µg/kg dry	3.69	2.04	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 7.37		µg/kg dry	7.37	2.38	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 7.37		µg/kg dry	7.37	1.98	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.69		µg/kg dry	3.69	3.33	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.69		µg/kg dry	3.69	3.12	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.69		µg/kg dry	3.69	2.85	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.69		µg/kg dry	3.69	2.76	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.69		µg/kg dry	3.69	3.38	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.69		µg/kg dry	3.69	2.05	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.69		µg/kg dry	3.69	2.34	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.69		µg/kg dry	3.69	3.11	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.69		µg/kg dry	3.69	3.40	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.69		µg/kg dry	3.69	3.50	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.69		µg/kg dry	3.69	2.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.69		µg/kg dry	3.69	2.78	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.69		µg/kg dry	3.69	2.48	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.69		µg/kg dry	3.69	2.82	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.69		µg/kg dry	3.69	3.24	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.69		µg/kg dry	3.69	3.12	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.69		µg/kg dry	3.69	3.13	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.69		µg/kg dry	3.69	2.25	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 7.37		µg/kg dry	7.37	5.03	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.69		µg/kg dry	3.69	2.69	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 7.37		µg/kg dry	7.37	1.86	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.69		µg/kg dry	3.69	1.94	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.69		µg/kg dry	3.69	2.91	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.69		µg/kg dry	3.69	2.43	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.69		µg/kg dry	3.69	2.63	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 73.7		µg/kg dry	73.7	19.8	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 73.7		µg/kg dry	73.7	22.9	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 18.4		µg/kg dry	18.4	2.72	1	"	"	"	"	"	X
64-17-5	Ethanol	< 737		µg/kg dry	737	45.7	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
							Initial weight: 7.24 g						
460-00-4	*4-Bromofluorobenzene*	*77*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*94*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*114*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*107*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546			R01										
83-32-9	Acenaphthene	< 355		µg/kg dry	355	189	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**1,420**		µg/kg dry	355	185	1	"	"	"	"	"	X
62-53-3	Aniline	< 1760		µg/kg dry	1760	112	1	"	"	"	"	"	X
120-12-7	Anthracene	**1,100**		µg/kg dry	355	205	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 1760		µg/kg dry	1760	191	1	"	"	"	"	"	
92-87-5	Benzidine	< 3520		µg/kg dry	3520	112	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**6,460**		µg/kg dry	355	200	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**6,640**		µg/kg dry	355	243	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**8,170**		µg/kg dry	355	268	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**9,550**		µg/kg dry	355	251	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**3,640**		µg/kg dry	355	304	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 1760		µg/kg dry	1760	106	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 1760		µg/kg dry	1760	407	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 1760		µg/kg dry	1760	177	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 890		µg/kg dry	890	165	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 890		µg/kg dry	890	143	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 890		µg/kg dry	890	226	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 1760		µg/kg dry	1760	199	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 1760		µg/kg dry	1760	176	1	"	"	"	"	"	X
86-74-8	Carbazole	< 890		µg/kg dry	890	205	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 1760		µg/kg dry	1760	207	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 890		µg/kg dry	890	110	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 1760		µg/kg dry	1760	241	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 890		µg/kg dry	890	171	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 1760		µg/kg dry	1760	172	1	"	"	"	"	"	X
218-01-9	Chrysene	**6,770**		µg/kg dry	355	201	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	**2,450**		µg/kg dry	355	263	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 890		µg/kg dry	890	239	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1760		µg/kg dry	1760	210	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1760		µg/kg dry	1760	190	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1760		µg/kg dry	1760	200	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 1760		µg/kg dry	1760	195	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 890		µg/kg dry	890	216	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 1760		µg/kg dry	1760	184	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
131-11-3	Dimethyl phthalate	< 1760		µg/kg dry	1760	198	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 1760		µg/kg dry	1760	139	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 1760		µg/kg dry	1760	188	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 1760		µg/kg dry	1760	252	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 1760		µg/kg dry	1760	182	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 890		µg/kg dry	890	213	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 890		µg/kg dry	890	182	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 1760		µg/kg dry	1760	262	1	"	"	"	"	"	X
206-44-0	Fluoranthene	**6,580**		µg/kg dry	355	208	1	"	"	"	"	"	X
86-73-7	Fluorene	< 355		µg/kg dry	355	230	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 890		µg/kg dry	890	224	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 890		µg/kg dry	890	224	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 890		µg/kg dry	890	224	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 890		µg/kg dry	890	201	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**7,620**		µg/kg dry	355	243	1	"	"	"	"	"	X
78-59-1	Isophorone	< 890		µg/kg dry	890	137	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 355		µg/kg dry	355	249	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 1760		µg/kg dry	1760	141	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 1760		µg/kg dry	1760	138	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 355		µg/kg dry	355	205	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 1760		µg/kg dry	1760	159	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 1760		µg/kg dry	1760	163	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 890		µg/kg dry	890	234	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 890		µg/kg dry	890	206	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 890		µg/kg dry	890	156	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 7030		µg/kg dry	7030	234	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 890		µg/kg dry	890	116	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 890		µg/kg dry	890	156	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 1760		µg/kg dry	1760	179	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 1760		µg/kg dry	1760	209	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**1,720**		µg/kg dry	355	201	1	"	"	"	"	"	X
108-95-2	Phenol	< 1760		µg/kg dry	1760	178	1	"	"	"	"	"	X
129-00-0	Pyrene	**6,930**		µg/kg dry	355	196	1	"	"	"	"	"	X
110-86-1	Pyridine	< 1760		µg/kg dry	1760	416	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1760		µg/kg dry	1760	216	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 355		µg/kg dry	355	196	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 1760		µg/kg dry	1760	182	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 890		µg/kg dry	890	217	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 1760		µg/kg dry	1760	187	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 1760		µg/kg dry	1760	209	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*52*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*89*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TrenchC_0-6 SC59391-04	60139732*2900	Soil	18-Sep-20 09:42	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds			R01										
4165-60-0	*Nitrobenzene-d5*	*89*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*89*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*78*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*73*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC Prepared by method SW846 3546			R01										
	Total Petroleum Hydrocarbons	**1,220**		mg/kg dry	27.3	22.8	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*80*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*219*	S02		*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.45		mg/kg dry	3.45	0.186	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**11.1**		mg/kg dry	1.72	0.218	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**38.4**		mg/kg dry	1.15	0.136	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.575		mg/kg dry	0.575	0.0298	1	"	"	"	"	"	X
7440-47-3	Chromium	**10.1**		mg/kg dry	1.15	0.153	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0870**		mg/kg dry	0.0306	0.0085	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**44.2**		mg/kg dry	1.72	0.244	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.72		mg/kg dry	1.72	0.329	1	"	"	"	"	"	X
7704-34-9	Sulfur	**318**		mg/kg dry	28.7	1.97	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**93.7**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:42	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260
Prepared by method SW846 5035A Soil (high level) Initial weight: 30.15 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
78-93-3	2-Butanone (MEK)	< 68.3	D	µg/kg dry	68.3	15.6	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260 IS1
Prepared by method SW846 5035A Soil (low level) Initial weight: 9.45 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 2.97		µg/kg dry	2.97	1.94	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 29.7		µg/kg dry	29.7	6.66	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 2.97		µg/kg dry	2.97	1.78	1	"	"	"	"	"	X
71-43-2	Benzene	< 2.97		µg/kg dry	2.97	1.99	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 2.97		µg/kg dry	2.97	1.98	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 2.97		µg/kg dry	2.97	1.69	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 2.97		µg/kg dry	2.97	2.18	1	"	"	"	"	"	X
75-25-2	Bromoform	< 2.97		µg/kg dry	2.97	2.27	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 5.95		µg/kg dry	5.95	0.97	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 5.95		µg/kg dry	5.95	3.19	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 2.97		µg/kg dry	2.97	2.40	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 2.97		µg/kg dry	2.97	2.34	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 5.95		µg/kg dry	5.95	2.09	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 2.97		µg/kg dry	2.97	1.87	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 2.97		µg/kg dry	2.97	2.18	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 5.95		µg/kg dry	5.95	2.18	1	"	"	"	"	"	X
67-66-3	Chloroform	< 2.97		µg/kg dry	2.97	2.00	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 5.95		µg/kg dry	5.95	2.28	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 2.97		µg/kg dry	2.97	2.37	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 2.97		µg/kg dry	2.97	2.58	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 5.95		µg/kg dry	5.95	2.52	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 2.97		µg/kg dry	2.97	1.97	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 2.97		µg/kg dry	2.97	2.14	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 2.97		µg/kg dry	2.97	1.75	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 2.97		µg/kg dry	2.97	2.76	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 2.97		µg/kg dry	2.97	2.38	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 2.97		µg/kg dry	2.97	2.82	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 5.95		µg/kg dry	5.95	1.59	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 2.97		µg/kg dry	2.97	2.02	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 2.97		µg/kg dry	2.97	2.00	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 2.97		µg/kg dry	2.97	1.82	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 2.97		µg/kg dry	2.97	1.72	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 2.97		µg/kg dry	2.97	1.85	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 2.97		µg/kg dry	2.97	1.97	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 2.97		µg/kg dry	2.97	2.27	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
						Initial weight: 9.45 g							
594-20-7	2,2-Dichloropropane	< 2.97		µg/kg dry	2.97	2.05	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 2.97		µg/kg dry	2.97	2.02	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 2.97		µg/kg dry	2.97	1.94	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 2.97		µg/kg dry	2.97	2.26	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 2.97		µg/kg dry	2.97	2.12	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 5.95		µg/kg dry	5.95	2.99	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 5.95		µg/kg dry	5.95	1.75	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 2.97		µg/kg dry	2.97	2.25	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 2.97		µg/kg dry	2.97	2.92	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 2.97		µg/kg dry	2.97	1.65	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 5.95		µg/kg dry	5.95	1.92	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 5.95		µg/kg dry	5.95	1.59	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 2.97		µg/kg dry	2.97	2.69	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 2.97		µg/kg dry	2.97	2.52	1	"	"	"	"	"	X
100-42-5	Styrene	< 2.97		µg/kg dry	2.97	2.30	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 2.97		µg/kg dry	2.97	2.23	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 2.97		µg/kg dry	2.97	2.72	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 2.97		µg/kg dry	2.97	1.65	1	"	"	"	"	"	X
108-88-3	Toluene	< 2.97		µg/kg dry	2.97	1.89	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 2.97		µg/kg dry	2.97	2.51	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 2.97		µg/kg dry	2.97	2.74	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 2.97		µg/kg dry	2.97	2.82	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 2.97		µg/kg dry	2.97	2.03	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 2.97		µg/kg dry	2.97	2.24	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 2.97		µg/kg dry	2.97	2.00	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 2.97		µg/kg dry	2.97	2.27	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 2.97		µg/kg dry	2.97	2.62	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 2.97		µg/kg dry	2.97	2.52	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 2.97		µg/kg dry	2.97	2.53	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 2.97		µg/kg dry	2.97	1.81	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 5.95		µg/kg dry	5.95	4.06	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 2.97		µg/kg dry	2.97	2.17	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 5.95		µg/kg dry	5.95	1.50	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 2.97		µg/kg dry	2.97	1.56	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 2.97		µg/kg dry	2.97	2.35	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 2.97		µg/kg dry	2.97	1.96	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 2.97		µg/kg dry	2.97	2.12	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 59.5		µg/kg dry	59.5	15.9	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 59.5		µg/kg dry	59.5	18.5	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 14.9		µg/kg dry	14.9	2.19	1	"	"	"	"	"	X
64-17-5	Ethanol	< 595		µg/kg dry	595	36.9	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
						Initial weight: 9.45 g							
460-00-4	*4-Bromofluorobenzene*	*94*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*105*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*119*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*109*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546													
83-32-9	Acenaphthene	< 74.2		µg/kg dry	74.2	39.4	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	**114**		µg/kg dry	74.2	38.7	1	"	"	"	"	"	X
62-53-3	Aniline	< 367		µg/kg dry	367	23.4	1	"	"	"	"	"	X
120-12-7	Anthracene	**247**		µg/kg dry	74.2	42.7	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 367		µg/kg dry	367	39.8	1	"	"	"	"	"	
92-87-5	Benzidine	< 734		µg/kg dry	734	23.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**178**		µg/kg dry	74.2	41.7	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**262**		µg/kg dry	74.2	50.7	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**157**		µg/kg dry	74.2	55.9	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**185**		µg/kg dry	74.2	52.4	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**122**		µg/kg dry	74.2	63.4	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 367		µg/kg dry	367	22.0	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 367		µg/kg dry	367	85.0	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 367		µg/kg dry	367	37.1	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 186		µg/kg dry	186	34.4	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 186		µg/kg dry	186	29.8	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 186		µg/kg dry	186	47.3	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 367		µg/kg dry	367	41.5	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 367		µg/kg dry	367	36.8	1	"	"	"	"	"	X
86-74-8	Carbazole	< 186		µg/kg dry	186	42.7	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 367		µg/kg dry	367	43.2	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 186		µg/kg dry	186	22.9	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 367		µg/kg dry	367	50.3	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 186		µg/kg dry	186	35.6	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 367		µg/kg dry	367	35.9	1	"	"	"	"	"	X
218-01-9	Chrysene	**157**		µg/kg dry	74.2	42.0	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 74.2		µg/kg dry	74.2	54.9	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 186		µg/kg dry	186	50.0	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 367		µg/kg dry	367	43.8	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 367		µg/kg dry	367	39.6	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 367		µg/kg dry	367	41.7	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 367		µg/kg dry	367	40.6	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 186		µg/kg dry	186	45.1	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 367		µg/kg dry	367	38.5	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
131-11-3	Dimethyl phthalate	< 367		µg/kg dry	367	41.3	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 367		µg/kg dry	367	29.0	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 367		µg/kg dry	367	39.3	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 367		µg/kg dry	367	52.6	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 367		µg/kg dry	367	38.1	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 186		µg/kg dry	186	44.5	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 186		µg/kg dry	186	37.9	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 367		µg/kg dry	367	54.6	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 74.2		µg/kg dry	74.2	43.5	1	"	"	"	"	"	X
86-73-7	Fluorene	< 74.2		µg/kg dry	74.2	48.0	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 186		µg/kg dry	186	46.7	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 186		µg/kg dry	186	46.7	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 186		µg/kg dry	186	46.9	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 186		µg/kg dry	186	42.0	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**151**		µg/kg dry	74.2	50.7	1	"	"	"	"	"	X
78-59-1	Isophorone	< 186		µg/kg dry	186	28.6	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 74.2		µg/kg dry	74.2	52.0	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 367		µg/kg dry	367	29.5	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 367		µg/kg dry	367	28.8	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 74.2		µg/kg dry	74.2	42.8	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 367		µg/kg dry	367	33.3	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 367		µg/kg dry	367	33.9	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 186		µg/kg dry	186	49.0	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 186		µg/kg dry	186	43.0	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 186		µg/kg dry	186	32.5	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1470		µg/kg dry	1470	48.9	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 186		µg/kg dry	186	24.3	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 186		µg/kg dry	186	32.5	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 367		µg/kg dry	367	37.4	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 367		µg/kg dry	367	43.7	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 74.2		µg/kg dry	74.2	42.1	1	"	"	"	"	"	X
108-95-2	Phenol	< 367		µg/kg dry	367	37.2	1	"	"	"	"	"	X
129-00-0	Pyrene	< 74.2		µg/kg dry	74.2	41.0	1	"	"	"	"	"	X
110-86-1	Pyridine	< 367		µg/kg dry	367	86.9	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 367		µg/kg dry	367	45.2	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 74.2		µg/kg dry	74.2	41.0	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 367		µg/kg dry	367	37.9	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 186		µg/kg dry	186	45.4	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 367		µg/kg dry	367	39.1	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 367		µg/kg dry	367	43.7	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*52*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*86*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDB_5-10 SC59391-05	60139732*2900	Soil	18-Sep-20 11:10	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
4165-60-0	*Nitrobenzene-d5*	*75*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*90*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*71*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*66*			*30-130 %*			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Fingerprinting by GC

Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Total Petroleum Hydrocarbons	**39.9**		mg/kg dry	14.7	12.3	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	

Surrogate recoveries:

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
84-15-1	*o-Terphenyl*	*80*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*94*			*40-140 %*			"	"	"	"	"	

Total Metals by EPA 6000/7000 Series Methods

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7440-22-4	Silver	< 3.58		mg/kg dry	3.58	0.193	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**7.62**		mg/kg dry	1.79	0.227	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**25.5**		mg/kg dry	1.19	0.141	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.597		mg/kg dry	0.597	0.0309	1	"	"	"	"	"	X
7440-47-3	Chromium	**8.84**		mg/kg dry	1.19	0.159	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.0367		mg/kg dry	0.0367	0.0102	1	SW846 7471B	"	29-Sep-20	edt	2001785	X

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7439-92-1	Lead	**5.21**		mg/kg dry	1.79	0.253	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.79		mg/kg dry	1.79	0.341	1	"	"	"	"	"	X
7704-34-9	Sulfur	**60.9**		mg/kg dry	29.8	2.04	1	"	"	23-Sep-20	"	"	

General Chemistry Parameters

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	% Solids	**89.0**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	

Subcontracted Analyses

Prepared by method 7.3.3

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:43	2337	551420	

Prepared by method 7.3.4

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (high level)						Initial weight: 27.63 g							
78-93-3	2-Butanone (MEK)	< 65.1	D	µg/kg dry	65.1	14.9	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*112*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*112*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (low level)			IS1			Initial weight: 8.48 g							
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.16		µg/kg dry	3.16	2.06	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 31.6		µg/kg dry	31.6	7.07	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.16		µg/kg dry	3.16	1.89	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.16		µg/kg dry	3.16	2.11	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.16		µg/kg dry	3.16	2.10	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.16		µg/kg dry	3.16	1.79	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.16		µg/kg dry	3.16	2.32	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.16		µg/kg dry	3.16	2.41	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 6.31		µg/kg dry	6.31	1.03	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 6.31		µg/kg dry	6.31	3.38	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.16		µg/kg dry	3.16	2.54	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.16		µg/kg dry	3.16	2.49	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 6.31		µg/kg dry	6.31	2.21	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.16		µg/kg dry	3.16	1.99	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.16		µg/kg dry	3.16	2.31	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 6.31		µg/kg dry	6.31	2.32	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.16		µg/kg dry	3.16	2.12	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 6.31		µg/kg dry	6.31	2.42	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.16		µg/kg dry	3.16	2.51	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.16		µg/kg dry	3.16	2.74	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 6.31		µg/kg dry	6.31	2.68	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.16		µg/kg dry	3.16	2.09	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.16		µg/kg dry	3.16	2.27	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.16		µg/kg dry	3.16	1.86	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.16		µg/kg dry	3.16	2.93	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.16		µg/kg dry	3.16	2.53	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.16		µg/kg dry	3.16	2.99	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 6.31		µg/kg dry	6.31	1.69	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.16		µg/kg dry	3.16	2.14	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.16		µg/kg dry	3.16	2.13	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.16		µg/kg dry	3.16	1.93	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.16		µg/kg dry	3.16	1.82	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.16		µg/kg dry	3.16	1.96	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.16		µg/kg dry	3.16	2.09	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.16		µg/kg dry	3.16	2.41	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.48 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
594-20-7	2,2-Dichloropropane	< 3.16		µg/kg dry	3.16	2.18	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.16		µg/kg dry	3.16	2.15	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.16		µg/kg dry	3.16	2.06	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.16		µg/kg dry	3.16	2.40	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.16		µg/kg dry	3.16	2.25	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 6.31		µg/kg dry	6.31	3.17	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 6.31		µg/kg dry	6.31	1.86	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.16		µg/kg dry	3.16	2.39	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.16		µg/kg dry	3.16	3.10	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.16		µg/kg dry	3.16	1.75	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 6.31		µg/kg dry	6.31	2.04	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 6.31		µg/kg dry	6.31	1.69	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.16		µg/kg dry	3.16	2.85	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.16		µg/kg dry	3.16	2.67	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.16		µg/kg dry	3.16	2.44	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.16		µg/kg dry	3.16	2.37	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.16		µg/kg dry	3.16	2.89	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.16		µg/kg dry	3.16	1.75	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.16		µg/kg dry	3.16	2.00	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.16		µg/kg dry	3.16	2.66	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.16		µg/kg dry	3.16	2.91	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.16		µg/kg dry	3.16	3.00	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.16		µg/kg dry	3.16	2.15	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.16		µg/kg dry	3.16	2.38	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.16		µg/kg dry	3.16	2.12	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.16		µg/kg dry	3.16	2.41	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.16		µg/kg dry	3.16	2.78	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.16		µg/kg dry	3.16	2.67	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.16		µg/kg dry	3.16	2.68	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.16		µg/kg dry	3.16	1.92	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 6.31		µg/kg dry	6.31	4.31	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.16		µg/kg dry	3.16	2.30	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 6.31		µg/kg dry	6.31	1.60	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.16		µg/kg dry	3.16	1.66	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.16		µg/kg dry	3.16	2.49	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.16		µg/kg dry	3.16	2.08	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.16		µg/kg dry	3.16	2.25	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 63.1		µg/kg dry	63.1	16.9	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 63.1		µg/kg dry	63.1	19.6	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 15.8		µg/kg dry	15.8	2.33	1	"	"	"	"	"	X
64-17-5	Ethanol	< 631		µg/kg dry	631	39.1	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
							Initial weight: 8.48 g						
460-00-4	*4-Bromofluorobenzene*	*75*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*97*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*114*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*111*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546													
83-32-9	Acenaphthene	< 70.1		µg/kg dry	70.1	37.2	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	< 70.1		µg/kg dry	70.1	36.6	1	"	"	"	"	"	X
62-53-3	Aniline	< 347		µg/kg dry	347	22.1	1	"	"	"	"	"	X
120-12-7	Anthracene	**91.8**		µg/kg dry	70.1	40.4	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 347		µg/kg dry	347	37.6	1	"	"	"	"	"	
92-87-5	Benzidine	< 694		µg/kg dry	694	22.1	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**174**		µg/kg dry	70.1	39.4	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**192**		µg/kg dry	70.1	48.0	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**311**		µg/kg dry	70.1	52.8	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**325**		µg/kg dry	70.1	49.5	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**211**		µg/kg dry	70.1	59.9	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 347		µg/kg dry	347	20.8	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 347		µg/kg dry	347	80.3	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 347		µg/kg dry	347	35.0	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 176		µg/kg dry	176	32.5	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 176		µg/kg dry	176	28.2	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 176		µg/kg dry	176	44.7	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 347		µg/kg dry	347	39.2	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 347		µg/kg dry	347	34.8	1	"	"	"	"	"	X
86-74-8	Carbazole	< 176		µg/kg dry	176	40.4	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 347		µg/kg dry	347	40.8	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 176		µg/kg dry	176	21.7	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 347		µg/kg dry	347	47.5	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 176		µg/kg dry	176	33.7	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 347		µg/kg dry	347	34.0	1	"	"	"	"	"	X
218-01-9	Chrysene	**218**		µg/kg dry	70.1	39.6	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	**111**		µg/kg dry	70.1	51.8	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 176		µg/kg dry	176	47.2	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 347		µg/kg dry	347	41.4	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 347		µg/kg dry	347	37.4	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 347		µg/kg dry	347	39.4	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 347		µg/kg dry	347	38.4	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 176		µg/kg dry	176	42.6	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 347		µg/kg dry	347	36.4	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
131-11-3	Dimethyl phthalate	< 347		µg/kg dry	347	39.0	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 347		µg/kg dry	347	27.4	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 347		µg/kg dry	347	37.1	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 347		µg/kg dry	347	49.7	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 347		µg/kg dry	347	36.0	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 176		µg/kg dry	176	42.1	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 176		µg/kg dry	176	35.9	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 347		µg/kg dry	347	51.6	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 70.1		µg/kg dry	70.1	41.1	1	"	"	"	"	"	X
86-73-7	Fluorene	< 70.1		µg/kg dry	70.1	45.3	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 176		µg/kg dry	176	44.2	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 176		µg/kg dry	176	44.2	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 176		µg/kg dry	176	44.3	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 176		µg/kg dry	176	39.6	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**267**		µg/kg dry	70.1	48.0	1	"	"	"	"	"	X
78-59-1	Isophorone	< 176		µg/kg dry	176	27.0	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	**73.6**		µg/kg dry	70.1	49.1	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 347		µg/kg dry	347	27.9	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 347		µg/kg dry	347	27.2	1	"	"	"	"	"	X
91-20-3	Naphthalene	**98.5**		µg/kg dry	70.1	40.5	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 347		µg/kg dry	347	31.4	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 347		µg/kg dry	347	32.1	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 176		µg/kg dry	176	46.3	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 176		µg/kg dry	176	40.6	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 176		µg/kg dry	176	30.7	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1390		µg/kg dry	1390	46.2	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 176		µg/kg dry	176	22.9	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 176		µg/kg dry	176	30.7	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 347		µg/kg dry	347	35.3	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 347		µg/kg dry	347	41.3	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**285**		µg/kg dry	70.1	39.8	1	"	"	"	"	"	X
108-95-2	Phenol	< 347		µg/kg dry	347	35.1	1	"	"	"	"	"	X
129-00-0	Pyrene	< 70.1		µg/kg dry	70.1	38.7	1	"	"	"	"	"	X
110-86-1	Pyridine	< 347		µg/kg dry	347	82.1	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 347		µg/kg dry	347	42.7	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 70.1		µg/kg dry	70.1	38.7	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 347		µg/kg dry	347	35.9	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 176		µg/kg dry	176	42.9	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 347		µg/kg dry	347	36.9	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 347		µg/kg dry	347	41.3	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*49*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*76*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDA_5-10 SC59391-06	60139732*2900	Soil	18-Sep-20 10:40	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
4165-60-0	*Nitrobenzene-d5*	*74*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*82*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*74*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*60*			*30-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
Fingerprinting by GC													
Prepared by method SW846 3546													
	Total Petroleum Hydrocarbons	**26.2**		mg/kg dry	13.7	11.5	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
Surrogate recoveries:													
84-15-1	*o-Terphenyl*	*78*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*89*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3050B													
7440-22-4	Silver	< 3.33		mg/kg dry	3.33	0.180	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**9.30**		mg/kg dry	1.66	0.211	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**45.9**		mg/kg dry	1.11	0.131	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.555		mg/kg dry	0.555	0.0287	1	"	"	"	"	"	X
7440-47-3	Chromium	**11.7**		mg/kg dry	1.11	0.148	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0417**		mg/kg dry	0.0310	0.0086	1	SW846 7471B	"	29-Sep-20	edt	2001785	X
Prepared by method SW846 3050B													
7439-92-1	Lead	**39.2**		mg/kg dry	1.66	0.235	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.66		mg/kg dry	1.66	0.317	1	"	"	"	"	"	X
7704-34-9	Sulfur	**158**		mg/kg dry	27.7	1.90	1	"	"	23-Sep-20	"	"	
General Chemistry Parameters													
	% Solids	**93.4**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	
Subcontracted Analyses													
Prepared by method 7.3.3													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:44	2337	551420	
Prepared by method 7.3.4													
Analysis performed by Eurofins TestAmerica - Buffalo - 2337													
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level) Initial weight: 25.79 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
78-93-3	2-Butanone (MEK)	< 86.2	D	µg/kg dry	86.2	19.7	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X

Surrogate recoveries:

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260 IS1

Prepared by method SW846 5035A Soil (low level) Initial weight: 8.03 g

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 3.66		µg/kg dry	3.66	2.39	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 36.6		µg/kg dry	36.6	8.21	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 3.66		µg/kg dry	3.66	2.20	1	"	"	"	"	"	X
71-43-2	Benzene	< 3.66		µg/kg dry	3.66	2.45	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 3.66		µg/kg dry	3.66	2.44	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 3.66		µg/kg dry	3.66	2.08	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 3.66		µg/kg dry	3.66	2.69	1	"	"	"	"	"	X
75-25-2	Bromoform	< 3.66		µg/kg dry	3.66	2.80	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 7.33		µg/kg dry	7.33	1.19	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 7.33		µg/kg dry	7.33	3.93	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 3.66		µg/kg dry	3.66	2.95	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 3.66		µg/kg dry	3.66	2.89	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 7.33		µg/kg dry	7.33	2.57	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 3.66		µg/kg dry	3.66	2.31	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 3.66		µg/kg dry	3.66	2.68	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 7.33		µg/kg dry	7.33	2.69	1	"	"	"	"	"	X
67-66-3	Chloroform	< 3.66		µg/kg dry	3.66	2.46	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 7.33		µg/kg dry	7.33	2.81	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 3.66		µg/kg dry	3.66	2.92	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 3.66		µg/kg dry	3.66	3.18	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 7.33		µg/kg dry	7.33	3.11	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 3.66		µg/kg dry	3.66	2.43	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 3.66		µg/kg dry	3.66	2.63	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 3.66		µg/kg dry	3.66	2.15	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 3.66		µg/kg dry	3.66	3.40	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 3.66		µg/kg dry	3.66	2.94	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 3.66		µg/kg dry	3.66	3.47	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 7.33		µg/kg dry	7.33	1.96	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 3.66		µg/kg dry	3.66	2.48	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 3.66		µg/kg dry	3.66	2.47	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 3.66		µg/kg dry	3.66	2.24	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.66		µg/kg dry	3.66	2.12	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 3.66		µg/kg dry	3.66	2.28	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.66		µg/kg dry	3.66	2.43	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 3.66		µg/kg dry	3.66	2.80	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260 IS1

Initial weight: 8.03 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 3.66		µg/kg dry	3.66	2.53	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 3.66		µg/kg dry	3.66	2.49	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.66		µg/kg dry	3.66	2.39	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 3.66		µg/kg dry	3.66	2.79	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 3.66		µg/kg dry	3.66	2.62	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 7.33		µg/kg dry	7.33	3.69	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 7.33		µg/kg dry	7.33	2.15	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 3.66		µg/kg dry	3.66	2.77	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 3.66		µg/kg dry	3.66	3.60	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.66		µg/kg dry	3.66	2.03	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 7.33		µg/kg dry	7.33	2.37	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 7.33		µg/kg dry	7.33	1.96	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 3.66		µg/kg dry	3.66	3.31	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 3.66		µg/kg dry	3.66	3.10	1	"	"	"	"	"	X
100-42-5	Styrene	< 3.66		µg/kg dry	3.66	2.84	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 3.66		µg/kg dry	3.66	2.75	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 3.66		µg/kg dry	3.66	3.36	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 3.66		µg/kg dry	3.66	2.04	1	"	"	"	"	"	X
108-88-3	Toluene	< 3.66		µg/kg dry	3.66	2.32	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 3.66		µg/kg dry	3.66	3.09	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 3.66		µg/kg dry	3.66	3.38	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 3.66		µg/kg dry	3.66	3.48	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 3.66		µg/kg dry	3.66	2.50	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 3.66		µg/kg dry	3.66	2.76	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 3.66		µg/kg dry	3.66	2.46	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 3.66		µg/kg dry	3.66	2.80	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 3.66		µg/kg dry	3.66	3.22	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 3.66		µg/kg dry	3.66	3.10	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 3.66		µg/kg dry	3.66	3.11	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 3.66		µg/kg dry	3.66	2.24	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 7.33		µg/kg dry	7.33	5.01	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 3.66		µg/kg dry	3.66	2.68	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 7.33		µg/kg dry	7.33	1.85	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 3.66		µg/kg dry	3.66	1.93	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 3.66		µg/kg dry	3.66	2.90	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 3.66		µg/kg dry	3.66	2.41	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 3.66		µg/kg dry	3.66	2.62	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 73.3		µg/kg dry	73.3	19.6	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 73.3		µg/kg dry	73.3	22.8	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 18.3		µg/kg dry	18.3	2.70	1	"	"	"	"	"	X
64-17-5	Ethanol	< 733		µg/kg dry	733	45.4	1	"	"	"	"	"	

Surrogate recoveries:

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			IS1										
							Initial weight: 8.03 g						
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	*Toluene-d8*	*105*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*128*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*113*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3546													
83-32-9	Acenaphthene	< 76.9		µg/kg dry	76.9	40.8	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
208-96-8	Acenaphthylene	< 76.9		µg/kg dry	76.9	40.1	1	"	"	"	"	"	X
62-53-3	Aniline	< 381		µg/kg dry	381	24.2	1	"	"	"	"	"	X
120-12-7	Anthracene	< 76.9		µg/kg dry	76.9	44.3	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 381		µg/kg dry	381	41.3	1	"	"	"	"	"	
92-87-5	Benzidine	< 761		µg/kg dry	761	24.2	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 76.9		µg/kg dry	76.9	43.2	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 76.9		µg/kg dry	76.9	52.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 76.9		µg/kg dry	76.9	57.9	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 76.9		µg/kg dry	76.9	54.3	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 76.9		µg/kg dry	76.9	65.7	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 381		µg/kg dry	381	22.8	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 381		µg/kg dry	381	88.1	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 381		µg/kg dry	381	38.4	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 193		µg/kg dry	193	35.6	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 193		µg/kg dry	193	30.9	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 193		µg/kg dry	193	49.0	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 381		µg/kg dry	381	43.0	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 381		µg/kg dry	381	38.2	1	"	"	"	"	"	X
86-74-8	Carbazole	< 193		µg/kg dry	193	44.3	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 381		µg/kg dry	381	44.7	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 193		µg/kg dry	193	23.8	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 381		µg/kg dry	381	52.1	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 193		µg/kg dry	193	36.9	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 381		µg/kg dry	381	37.2	1	"	"	"	"	"	X
218-01-9	Chrysene	< 76.9		µg/kg dry	76.9	43.5	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 76.9		µg/kg dry	76.9	56.8	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 193		µg/kg dry	193	51.8	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 381		µg/kg dry	381	45.4	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 381		µg/kg dry	381	41.0	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 381		µg/kg dry	381	43.2	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 381		µg/kg dry	381	42.1	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 193		µg/kg dry	193	46.7	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 381		µg/kg dry	381	39.9	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
131-11-3	Dimethyl phthalate	< 381		µg/kg dry	381	42.8	1	SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	X
105-67-9	2,4-Dimethylphenol	< 381		µg/kg dry	381	30.1	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 381		µg/kg dry	381	40.7	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 381		µg/kg dry	381	54.5	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 381		µg/kg dry	381	39.4	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 193		µg/kg dry	193	46.1	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 193		µg/kg dry	193	39.3	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 381		µg/kg dry	381	56.6	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 76.9		µg/kg dry	76.9	45.1	1	"	"	"	"	"	X
86-73-7	Fluorene	< 76.9		µg/kg dry	76.9	49.7	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 193		µg/kg dry	193	48.4	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 193		µg/kg dry	193	48.4	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 193		µg/kg dry	193	48.5	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 193		µg/kg dry	193	43.5	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 76.9		µg/kg dry	76.9	52.6	1	"	"	"	"	"	X
78-59-1	Isophorone	< 193		µg/kg dry	193	29.6	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 76.9		µg/kg dry	76.9	53.8	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 381		µg/kg dry	381	30.6	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 381		µg/kg dry	381	29.9	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 76.9		µg/kg dry	76.9	44.4	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 381		µg/kg dry	381	34.5	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 381		µg/kg dry	381	35.2	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 193		µg/kg dry	193	50.7	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 193		µg/kg dry	193	44.5	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 193		µg/kg dry	193	33.7	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 1520		µg/kg dry	1520	50.6	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 193		µg/kg dry	193	25.1	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 193		µg/kg dry	193	33.7	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 381		µg/kg dry	381	38.7	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 381		µg/kg dry	381	45.3	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 76.9		µg/kg dry	76.9	43.6	1	"	"	"	"	"	X
108-95-2	Phenol	< 381		µg/kg dry	381	38.5	1	"	"	"	"	"	X
129-00-0	Pyrene	< 76.9		µg/kg dry	76.9	42.4	1	"	"	"	"	"	X
110-86-1	Pyridine	< 381		µg/kg dry	381	90.1	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 381		µg/kg dry	381	46.8	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 76.9		µg/kg dry	76.9	42.4	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 381		µg/kg dry	381	39.3	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 193		µg/kg dry	193	47.0	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 381		µg/kg dry	381	40.5	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 381		µg/kg dry	381	45.3	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*49*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
HDDC_5-10 SC59391-07	60139732*2900	Soil	18-Sep-20 11:38	21-Sep-20

Semivolatile Organic Compounds by GCMS

Semivolatile Organic Compounds

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
4165-60-0	*Nitrobenzene-d5*	*64*			*30-130 %*			SW846 8270D	22-Sep-20	22-Sep-20	BJJ	2001800	
4165-62-2	*Phenol-d5*	*67*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*69*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*69*			*30-130 %*			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Fingerprinting by GC

Prepared by method SW846 3546

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Total Petroleum Hydrocarbons	< 15.1		mg/kg dry	15.1	12.7	1	SW846 8100Mod.	22-Sep-20	22-Sep-20	BJJ	2001798	
	Surrogate recoveries:												
84-15-1	*o-Terphenyl*	*71*			*40-140 %*			"	"	"	"	"	
3386-33-2	*1-Chlorooctadecane*	*86*			*40-140 %*			"	"	"	"	"	

Total Metals by EPA 6000/7000 Series Methods

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7440-22-4	Silver	< 3.89		mg/kg dry	3.89	0.210	1	SW846 6010C	22-Sep-20	29-Sep-20	EDT	2001784	X
7440-38-2	Arsenic	**5.98**		mg/kg dry	1.95	0.247	1	"	"	23-Sep-20	"	"	X
7440-39-3	Barium	**20.4**		mg/kg dry	1.30	0.153	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.649		mg/kg dry	0.649	0.0336	1	"	"	"	"	"	X
7440-47-3	Chromium	**7.03**		mg/kg dry	1.30	0.173	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.0316		mg/kg dry	0.0316	0.0088	1	SW846 7471B	"	29-Sep-20	edt	2001785	X

Prepared by method SW846 3050B

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
7439-92-1	Lead	**3.36**		mg/kg dry	1.95	0.275	1	SW846 6010C	"	28-Sep-20	PMH/EDT	2001784	X
7782-49-2	Selenium	< 1.95		mg/kg dry	1.95	0.371	1	"	"	"	"	"	X
7704-34-9	Sulfur	**83.8**		mg/kg dry	32.4	2.22	1	"	"	23-Sep-20	"	"	

General Chemistry Parameters

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	% Solids	**85.0**		%			1	SM2540 G (11) Mod.	22-Sep-20	23-Sep-20	EDT	2001790	

Subcontracted Analyses

Prepared by method 7.3.3

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Cyanide, Reactive	< 10		mg/kg	10	10	1	SW846 9012_ReactiveCN	27-Sep-20 09:10	28-Sep-20 16:46	2337	551420	

Prepared by method 7.3.4

Analysis performed by Eurofins TestAmerica - Buffalo - 2337

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	Sulfide, Reactive	< 10		mg/kg	10	10	1	SW846 9034_Reactive	"	28-Sep-20 14:06	2337	551421	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC59391-08	60139732*2900	Trip Blank	18-Sep-20 00:00	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (high level) — Initial weight: 15 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
78-93-3	2-Butanone (MEK)	< 100	D	µg/kg wet	100	22.8	50	SW846 8260C	23-Sep-20	23-Sep-20	DDP	2001812	X

Surrogate recoveries:

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*110*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (low level) — Initial weight: 5 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00		µg/kg wet	5.00	3.26	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
67-64-1	Acetone	< 50.0		µg/kg wet	50.0	11.2	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 5.00		µg/kg wet	5.00	3.00	1	"	"	"	"	"	X
71-43-2	Benzene	< 5.00		µg/kg wet	5.00	3.34	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 5.00		µg/kg wet	5.00	3.33	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 5.00		µg/kg wet	5.00	2.84	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 5.00		µg/kg wet	5.00	3.67	1	"	"	"	"	"	X
75-25-2	Bromoform	< 5.00		µg/kg wet	5.00	3.82	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 10.0		µg/kg wet	10.0	1.63	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 10.0		µg/kg wet	10.0	5.36	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 5.00		µg/kg wet	5.00	4.03	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 5.00		µg/kg wet	5.00	3.94	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 10.0		µg/kg wet	10.0	3.51	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.00		µg/kg wet	5.00	3.15	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.00		µg/kg wet	5.00	3.66	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 10.0		µg/kg wet	10.0	3.67	1	"	"	"	"	"	X
67-66-3	Chloroform	< 5.00		µg/kg wet	5.00	3.36	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 10.0		µg/kg wet	10.0	3.84	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 5.00		µg/kg wet	5.00	3.98	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 5.00		µg/kg wet	5.00	4.34	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0	4.24	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 5.00		µg/kg wet	5.00	3.31	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 5.00		µg/kg wet	5.00	3.59	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 5.00		µg/kg wet	5.00	2.94	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.00		µg/kg wet	5.00	4.64	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.00		µg/kg wet	5.00	4.01	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.00		µg/kg wet	5.00	4.74	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0	2.68	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.00		µg/kg wet	5.00	3.39	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.00		µg/kg wet	5.00	3.37	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.00		µg/kg wet	5.00	3.06	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00	2.89	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00	3.11	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.00		µg/kg wet	5.00	3.31	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 5.00		µg/kg wet	5.00	3.82	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC59391-08	60139732*2900	Trip Blank	18-Sep-20 00:00	21-Sep-20

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Initial weight: 5 g

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
594-20-7	2,2-Dichloropropane	< 5.00		µg/kg wet	5.00	3.45	1	SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	X
563-58-6	1,1-Dichloropropene	< 5.00		µg/kg wet	5.00	3.40	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00	3.26	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00	3.80	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.00		µg/kg wet	5.00	3.57	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 10.0		µg/kg wet	10.0	5.03	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 10.0		µg/kg wet	10.0	2.94	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.00		µg/kg wet	5.00	3.78	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 5.00		µg/kg wet	5.00	4.91	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 5.00		µg/kg wet	5.00	2.77	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/kg wet	10.0	3.23	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 10.0		µg/kg wet	10.0	2.68	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.00		µg/kg wet	5.00	4.52	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 5.00		µg/kg wet	5.00	4.23	1	"	"	"	"	"	X
100-42-5	Styrene	< 5.00		µg/kg wet	5.00	3.87	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00	3.75	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00	4.58	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 5.00		µg/kg wet	5.00	2.78	1	"	"	"	"	"	X
108-88-3	Toluene	< 5.00		µg/kg wet	5.00	3.17	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 5.00		µg/kg wet	5.00	4.22	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.00		µg/kg wet	5.00	4.61	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 5.00		µg/kg wet	5.00	4.75	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 5.00		µg/kg wet	5.00	3.41	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.00		µg/kg wet	5.00	3.77	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 5.00		µg/kg wet	5.00	3.36	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 5.00		µg/kg wet	5.00	3.82	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 5.00		µg/kg wet	5.00	4.40	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 5.00		µg/kg wet	5.00	4.23	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 5.00		µg/kg wet	5.00	4.25	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 5.00		µg/kg wet	5.00	3.05	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 10.0		µg/kg wet	10.0	6.83	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 5.00		µg/kg wet	5.00	3.65	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 10.0		µg/kg wet	10.0	2.53	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5.00		µg/kg wet	5.00	2.63	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 5.00		µg/kg wet	5.00	3.95	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 5.00		µg/kg wet	5.00	3.29	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 5.00		µg/kg wet	5.00	3.57	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 100		µg/kg wet	100	26.8	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 100		µg/kg wet	100	31.1	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0	3.69	1	"	"	"	"	"	X
64-17-5	Ethanol	< 1000		µg/kg wet	1000	62.0	1	"	"	"	"	"	

Surrogate recoveries:

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC59391-08	60139732*2900	Trip Blank	18-Sep-20 00:00	21-Sep-20

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
							Initial weight: 5 g						
460-00-4	4-Bromofluorobenzene	92			70-130 %			SW846 8260C LLS	28-Sep-20	28-Sep-20	DDP	2001826	
2037-26-5	Toluene-d8	101			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	107			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	103			70-130 %			"	"	"	"	"	

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Volatile Organic Compounds - Quality Control

SW846 8260C

Batch 2001812 - SW846 5035A Soil (high level)

Blank (2001812-BLK1) Prepared & Analyzed: 23-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
2-Butanone (MEK)	< 100	D	µg/kg wet	100						
Surrogate: 4-Bromofluorobenzene	*47.9*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*55.0*		µg/l		*50.0*		*110*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*55.7*		µg/l		*50.0*		*111*	*70-130*		
Surrogate: Dibromofluoromethane	*52.0*		µg/l		*50.0*		*104*	*70-130*		

LCS (2001812-BS1) Prepared & Analyzed: 23-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
2-Butanone (MEK)	**24.5**	D	µg/l		20.0		122	70-130		
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*55.2*		µg/l		*50.0*		*110*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.1*		µg/l		*50.0*		*108*	*70-130*		
Surrogate: Dibromofluoromethane	*50.8*		µg/l		*50.0*		*102*	*70-130*		

LCS Dup (2001812-BSD1) Prepared & Analyzed: 23-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
2-Butanone (MEK)	**25.9**	D	µg/l		20.0		129	70-130	6	30
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*56.4*		µg/l		*50.0*		*113*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*56.4*		µg/l		*50.0*		*113*	*70-130*		
Surrogate: Dibromofluoromethane	*51.8*		µg/l		*50.0*		*104*	*70-130*		

SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

Blank (2001826-BLK1) Prepared & Analyzed: 28-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00		µg/kg wet	5.00						
Acetone	< 50.0		µg/kg wet	50.0						
Acrylonitrile	< 5.00		µg/kg wet	5.00						
Benzene	< 5.00		µg/kg wet	5.00						
Bromobenzene	< 5.00		µg/kg wet	5.00						
Bromochloromethane	< 5.00		µg/kg wet	5.00						
Bromodichloromethane	< 5.00		µg/kg wet	5.00						
Bromoform	< 5.00		µg/kg wet	5.00						
Bromomethane	< 10.0		µg/kg wet	10.0						
n-Butylbenzene	< 10.0		µg/kg wet	10.0						
sec-Butylbenzene	< 5.00		µg/kg wet	5.00						
tert-Butylbenzene	< 5.00		µg/kg wet	5.00						
Carbon disulfide	< 10.0		µg/kg wet	10.0						
Carbon tetrachloride	< 5.00		µg/kg wet	5.00						
Chlorobenzene	< 5.00		µg/kg wet	5.00						
Chloroethane	< 10.0		µg/kg wet	10.0						
Chloroform	< 5.00		µg/kg wet	5.00						
Chloromethane	< 10.0		µg/kg wet	10.0						
2-Chlorotoluene	< 5.00		µg/kg wet	5.00						
4-Chlorotoluene	< 5.00		µg/kg wet	5.00						
1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0						
Dibromochloromethane	< 5.00		µg/kg wet	5.00						
1,2-Dibromoethane (EDB)	< 5.00		µg/kg wet	5.00						
Dibromomethane	< 5.00		µg/kg wet	5.00						
1,2-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,4-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0						
1,1-Dichloroethane	< 5.00		µg/kg wet	5.00						

Volatile Organic Compounds - Quality Control

SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

Blank (2001826-BLK1) Prepared & Analyzed: 28-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	< 5.00		µg/kg wet	5.00						
1,1-Dichloroethene	< 5.00		µg/kg wet	5.00						
cis-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
trans-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
1,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,3-Dichloropropane	< 5.00		µg/kg wet	5.00						
2,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,1-Dichloropropene	< 5.00		µg/kg wet	5.00						
cis-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
trans-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
Ethylbenzene	< 5.00		µg/kg wet	5.00						
Hexachlorobutadiene	< 10.0		µg/kg wet	10.0						
2-Hexanone (MBK)	< 10.0		µg/kg wet	10.0						
Isopropylbenzene	< 5.00		µg/kg wet	5.00						
4-Isopropyltoluene	< 5.00		µg/kg wet	5.00						
Methyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/kg wet	10.0						
Methylene chloride	< 10.0		µg/kg wet	10.0						
Naphthalene	< 5.00		µg/kg wet	5.00						
n-Propylbenzene	< 5.00		µg/kg wet	5.00						
Styrene	< 5.00		µg/kg wet	5.00						
1,1,1,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						
1,1,2,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						
Tetrachloroethene	< 5.00		µg/kg wet	5.00						
Toluene	< 5.00		µg/kg wet	5.00						
1,2,3-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,1,1-Trichloroethane	< 5.00		µg/kg wet	5.00						
1,1,2-Trichloroethane	< 5.00		µg/kg wet	5.00						
Trichloroethene	< 5.00		µg/kg wet	5.00						
Trichlorofluoromethane (Freon 11)	< 5.00		µg/kg wet	5.00						
1,2,3-Trichloropropane	< 5.00		µg/kg wet	5.00						
1,2,4-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
Vinyl chloride	< 5.00		µg/kg wet	5.00						
m,p-Xylene	< 10.0		µg/kg wet	10.0						
o-Xylene	< 5.00		µg/kg wet	5.00						
Tetrahydrofuran	< 10.0		µg/kg wet	10.0						
Ethyl ether	< 5.00		µg/kg wet	5.00						
Tert-amyl methyl ether	< 5.00		µg/kg wet	5.00						
Ethyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
Di-isopropyl ether	< 5.00		µg/kg wet	5.00						
Tert-Butanol / butyl alcohol	< 100		µg/kg wet	100						
1,4-Dioxane	< 100		µg/kg wet	100						
trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0						
Ethanol	< 1000		µg/kg wet	1000						
Surrogate: 4-Bromofluorobenzene	*48.8*		µg/kg wet		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.5*		µg/kg wet		*50.0*		*105*	*70-130*		

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SW846 8260C LLS

Batch 2001826 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2001826-BLK1)					Prepared & Analyzed: 28-Sep-20					
Surrogate: Dibromofluoromethane	*51.9*		µg/kg wet		*50.0*		*104*	*70-130*		
LCS (2001826-BS1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**20.1**		µg/kg		20.0		100	70-130		
Acetone	**10.4**	QC6	µg/kg		20.0		52	70-130		
Acrylonitrile	**18.1**		µg/kg		20.0		90	70-130		
Benzene	**19.7**		µg/kg		20.0		98	70-130		
Bromobenzene	**20.3**		µg/kg		20.0		101	70-130		
Bromochloromethane	**20.6**		µg/kg		20.0		103	70-130		
Bromodichloromethane	**20.0**		µg/kg		20.0		100	70-130		
Bromoform	**20.8**		µg/kg		20.0		104	70-130		
Bromomethane	**21.6**		µg/kg		20.0		108	70-130		
n-Butylbenzene	**20.0**		µg/kg		20.0		100	70-130		
sec-Butylbenzene	**20.5**		µg/kg		20.0		102	70-130		
tert-Butylbenzene	**20.4**		µg/kg		20.0		102	70-130		
Carbon disulfide	**20.1**		µg/kg		20.0		101	70-130		
Carbon tetrachloride	**20.6**		µg/kg		20.0		103	70-130		
Chlorobenzene	**20.5**		µg/kg		20.0		103	70-130		
Chloroethane	**103**	BsH, QC6	µg/kg		20.0		513	70-130		
Chloroform	**19.5**		µg/kg		20.0		98	70-130		
Chloromethane	**21.9**		µg/kg		20.0		109	70-130		
2-Chlorotoluene	**18.5**		µg/kg		20.0		93	70-130		
4-Chlorotoluene	**19.3**		µg/kg		20.0		96	70-130		
1,2-Dibromo-3-chloropropane	**19.3**		µg/kg		20.0		96	70-130		
Dibromochloromethane	**20.0**		µg/kg		20.0		100	70-130		
1,2-Dibromoethane (EDB)	**20.1**		µg/kg		20.0		100	70-130		
Dibromomethane	**19.1**		µg/kg		20.0		96	70-130		
1,2-Dichlorobenzene	**20.1**		µg/kg		20.0		100	70-130		
1,3-Dichlorobenzene	**20.3**		µg/kg		20.0		101	70-130		
1,4-Dichlorobenzene	**19.5**		µg/kg		20.0		97	70-130		
Dichlorodifluoromethane (Freon12)	**21.6**		µg/kg		20.0		108	70-130		
1,1-Dichloroethane	**19.8**		µg/kg		20.0		99	70-130		
1,2-Dichloroethane	**20.0**		µg/kg		20.0		100	70-130		
1,1-Dichloroethene	**19.7**		µg/kg		20.0		99	70-130		
cis-1,2-Dichloroethene	**19.6**		µg/kg		20.0		98	70-130		
trans-1,2-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130		
1,2-Dichloropropane	**19.3**		µg/kg		20.0		97	70-130		
1,3-Dichloropropane	**19.7**		µg/kg		20.0		98	70-130		
2,2-Dichloropropane	**20.0**		µg/kg		20.0		100	70-130		
1,1-Dichloropropene	**20.0**		µg/kg		20.0		100	70-130		
cis-1,3-Dichloropropene	**19.2**		µg/kg		20.0		96	70-130		
trans-1,3-Dichloropropene	**17.9**		µg/kg		20.0		89	70-130		
Ethylbenzene	**20.2**		µg/kg		20.0		101	70-130		
Hexachlorobutadiene	**20.7**		µg/kg		20.0		104	70-130		
2-Hexanone (MBK)	**19.2**		µg/kg		20.0		96	70-130		
Isopropylbenzene	**20.4**		µg/kg		20.0		102	70-130		
4-Isopropyltoluene	**19.5**		µg/kg		20.0		98	70-130		
Methyl tert-butyl ether	**19.4**		µg/kg		20.0		97	70-130		
4-Methyl-2-pentanone (MIBK)	**20.0**		µg/kg		20.0		100	70-130		
Methylene chloride	**19.6**		µg/kg		20.0		98	70-130		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
LCS (2001826-BS1)					Prepared & Analyzed: 28-Sep-20					
Naphthalene	**19.5**		µg/kg		20.0		97	70-130		
n-Propylbenzene	**20.1**		µg/kg		20.0		101	70-130		
Styrene	**19.8**		µg/kg		20.0		99	70-130		
1,1,1,2-Tetrachloroethane	**20.2**		µg/kg		20.0		101	70-130		
1,1,2,2-Tetrachloroethane	**20.3**		µg/kg		20.0		102	70-130		
Tetrachloroethene	**20.4**		µg/kg		20.0		102	70-130		
Toluene	**19.7**		µg/kg		20.0		99	70-130		
1,2,3-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130		
1,2,4-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130		
1,3,5-Trichlorobenzene	**19.8**		µg/kg		20.0		99	70-130		
1,1,1-Trichloroethane	**20.3**		µg/kg		20.0		102	70-130		
1,1,2-Trichloroethane	**19.9**		µg/kg		20.0		99	70-130		
Trichloroethene	**20.1**		µg/kg		20.0		100	70-130		
Trichlorofluoromethane (Freon 11)	**19.0**		µg/kg		20.0		95	70-130		
1,2,3-Trichloropropane	**19.9**		µg/kg		20.0		100	70-130		
1,2,4-Trimethylbenzene	**20.1**		µg/kg		20.0		100	70-130		
1,3,5-Trimethylbenzene	**19.7**		µg/kg		20.0		98	70-130		
Vinyl chloride	**21.8**		µg/kg		20.0		109	70-130		
m,p-Xylene	**38.8**		µg/kg		40.0		97	70-130		
o-Xylene	**20.2**		µg/kg		20.0		101	70-130		
Tetrahydrofuran	**17.7**		µg/kg		20.0		89	70-130		
Ethyl ether	**18.6**		µg/kg		20.0		93	70-130		
Tert-amyl methyl ether	**20.4**		µg/kg		20.0		102	70-130		
Ethyl tert-butyl ether	**18.9**		µg/kg		20.0		95	70-130		
Di-isopropyl ether	**19.3**		µg/kg		20.0		96	70-130		
Tert-Butanol / butyl alcohol	**182**		µg/kg		200		91	70-130		
1,4-Dioxane	**198**		µg/kg		200		99	70-130		
trans-1,4-Dichloro-2-butene	**20.0**		µg/kg		20.0		100	70-130		
Ethanol	**208**	QC6	µg/kg		400		52	70-130		
Surrogate: 4-Bromofluorobenzene	*51.1*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*50.6*		µg/kg wet		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.1*		µg/kg wet		*50.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*50.8*		µg/kg wet		*50.0*		*102*	*70-130*		
LCS Dup (2001826-BSD1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**20.0**		µg/kg		20.0		100	70-130	0.4	30
Acetone	**10.3**	QC6	µg/kg		20.0		52	70-130	0.4	30
Acrylonitrile	**20.1**		µg/kg		20.0		101	70-130	11	30
Benzene	**20.2**		µg/kg		20.0		101	70-130	2	30
Bromobenzene	**19.1**		µg/kg		20.0		95	70-130	6	30
Bromochloromethane	**20.8**		µg/kg		20.0		104	70-130	1	30
Bromodichloromethane	**20.9**		µg/kg		20.0		104	70-130	4	30
Bromoform	**19.4**		µg/kg		20.0		97	70-130	7	30
Bromomethane	**22.2**		µg/kg		20.0		111	70-130	2	30
n-Butylbenzene	**20.8**		µg/kg		20.0		104	70-130	4	30
sec-Butylbenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
tert-Butylbenzene	**19.4**		µg/kg		20.0		97	70-130	5	30
Carbon disulfide	**20.3**		µg/kg		20.0		102	70-130	1	30
Carbon tetrachloride	**19.9**		µg/kg		20.0		100	70-130	3	30
Chlorobenzene	**19.2**		µg/kg		20.0		96	70-130	7	30

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
LCS Dup (2001826-BSD1)					Prepared & Analyzed: 28-Sep-20					
Chloroethane	**103**	BsH, QC6	µg/kg		20.0		515	70-130	0.5	30
Chloroform	**19.9**		µg/kg		20.0		100	70-130	2	30
Chloromethane	**22.9**		µg/kg		20.0		115	70-130	5	30
2-Chlorotoluene	**19.4**		µg/kg		20.0		97	70-130	5	30
4-Chlorotoluene	**19.5**		µg/kg		20.0		98	70-130	1	30
1,2-Dibromo-3-chloropropane	**20.4**		µg/kg		20.0		102	70-130	5	30
Dibromochloromethane	**20.0**		µg/kg		20.0		100	70-130	0.2	30
1,2-Dibromoethane (EDB)	**20.4**		µg/kg		20.0		102	70-130	1	30
Dibromomethane	**19.6**		µg/kg		20.0		98	70-130	2	30
1,2-Dichlorobenzene	**20.1**		µg/kg		20.0		101	70-130	0.2	30
1,3-Dichlorobenzene	**19.1**		µg/kg		20.0		96	70-130	6	30
1,4-Dichlorobenzene	**19.8**		µg/kg		20.0		99	70-130	2	30
Dichlorodifluoromethane (Freon12)	**22.1**		µg/kg		20.0		110	70-130	2	30
1,1-Dichloroethane	**21.1**		µg/kg		20.0		105	70-130	6	30
1,2-Dichloroethane	**21.0**		µg/kg		20.0		105	70-130	5	30
1,1-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130	0.6	30
cis-1,2-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130	0.9	30
trans-1,2-Dichloroethene	**19.8**		µg/kg		20.0		99	70-130	0.3	30
1,2-Dichloropropane	**20.9**		µg/kg		20.0		105	70-130	8	30
1,3-Dichloropropane	**20.6**		µg/kg		20.0		103	70-130	4	30
2,2-Dichloropropane	**20.0**		µg/kg		20.0		100	70-130	0.1	30
1,1-Dichloropropene	**20.6**		µg/kg		20.0		103	70-130	3	30
cis-1,3-Dichloropropene	**20.2**		µg/kg		20.0		101	70-130	5	30
trans-1,3-Dichloropropene	**18.5**		µg/kg		20.0		92	70-130	3	30
Ethylbenzene	**19.7**		µg/kg		20.0		99	70-130	2	30
Hexachlorobutadiene	**20.3**		µg/kg		20.0		102	70-130	2	30
2-Hexanone (MBK)	**21.2**		µg/kg		20.0		106	70-130	10	30
Isopropylbenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
4-Isopropyltoluene	**20.2**		µg/kg		20.0		101	70-130	3	30
Methyl tert-butyl ether	**19.9**		µg/kg		20.0		99	70-130	2	30
4-Methyl-2-pentanone (MIBK)	**21.3**		µg/kg		20.0		107	70-130	7	30
Methylene chloride	**18.5**		µg/kg		20.0		92	70-130	6	30
Naphthalene	**20.4**		µg/kg		20.0		102	70-130	4	30
n-Propylbenzene	**19.5**		µg/kg		20.0		98	70-130	3	30
Styrene	**19.2**		µg/kg		20.0		96	70-130	3	30
1,1,1,2-Tetrachloroethane	**19.1**		µg/kg		20.0		95	70-130	6	30
1,1,2,2-Tetrachloroethane	**20.1**		µg/kg		20.0		101	70-130	0.8	30
Tetrachloroethene	**19.5**		µg/kg		20.0		98	70-130	4	30
Toluene	**19.6**		µg/kg		20.0		98	70-130	0.6	30
1,2,3-Trichlorobenzene	**19.9**		µg/kg		20.0		100	70-130	3	30
1,2,4-Trichlorobenzene	**19.5**		µg/kg		20.0		98	70-130	0.9	30
1,3,5-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130	2	30
1,1,1-Trichloroethane	**20.4**		µg/kg		20.0		102	70-130	0.2	30
1,1,2-Trichloroethane	**20.5**		µg/kg		20.0		102	70-130	3	30
Trichloroethene	**20.0**		µg/kg		20.0		100	70-130	0.2	30
Trichlorofluoromethane (Freon 11)	**18.0**		µg/kg		20.0		90	70-130	5	30
1,2,3-Trichloropropane	**19.5**		µg/kg		20.0		97	70-130	2	30
1,2,4-Trimethylbenzene	**19.0**		µg/kg		20.0		95	70-130	6	30
1,3,5-Trimethylbenzene	**18.8**		µg/kg		20.0		94	70-130	5	30
Vinyl chloride	**23.1**		µg/kg		20.0		115	70-130	6	30

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
LCS Dup (2001826-BSD1)					Prepared & Analyzed: 28-Sep-20					
m,p-Xylene	**36.8**		µg/kg		40.0		92	70-130	5	30
o-Xylene	**19.1**		µg/kg		20.0		95	70-130	6	30
Tetrahydrofuran	**19.8**		µg/kg		20.0		99	70-130	11	30
Ethyl ether	**19.6**		µg/kg		20.0		98	70-130	5	30
Tert-amyl methyl ether	**21.9**		µg/kg		20.0		109	70-130	7	30
Ethyl tert-butyl ether	**20.6**		µg/kg		20.0		103	70-130	8	30
Di-isopropyl ether	**20.9**		µg/kg		20.0		105	70-130	8	30
Tert-Butanol / butyl alcohol	**180**		µg/kg		200		90	70-130	1	30
1,4-Dioxane	**184**		µg/kg		200		92	70-130	7	30
trans-1,4-Dichloro-2-butene	**20.2**		µg/kg		20.0		101	70-130	1	30
Ethanol	**294**	QC6	µg/kg		400		73	70-130	34	30
Surrogate: 4-Bromofluorobenzene	*50.2*		µg/kg wet		*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.4*		µg/kg wet		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*50.0*		µg/kg wet		*50.0*		*100*	*70-130*		
MRL Check (2001826-MRL1)					Prepared & Analyzed: 28-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**4.74**		µg/kg		5.00		95	0-200		
Acetone	**14.4**	QC6	µg/kg		5.00		288	0-200		
Acrylonitrile	**5.71**		µg/kg		5.00		114	0-200		
Benzene	**4.39**		µg/kg		5.00		88	0-200		
Bromobenzene	**4.01**		µg/kg		5.00		80	0-200		
Bromochloromethane	**4.49**		µg/kg		5.00		90	0-200		
Bromodichloromethane	**4.64**		µg/kg		5.00		93	0-200		
Bromoform	**4.10**		µg/kg		5.00		82	0-200		
Bromomethane	**4.53**		µg/kg		5.00		91	0-200		
n-Butylbenzene	**4.63**		µg/kg		5.00		93	0-200		
sec-Butylbenzene	**4.01**		µg/kg		5.00		80	0-200		
tert-Butylbenzene	**3.71**		µg/kg		5.00		74	0-200		
Carbon disulfide	**4.60**		µg/kg		5.00		92	0-200		
Carbon tetrachloride	**4.08**		µg/kg		5.00		82	0-200		
Chlorobenzene	**4.27**		µg/kg		5.00		85	0-200		
Chloroethane	**6.73**		µg/kg		5.00		135	0-200		
Chloroform	**4.85**		µg/kg		5.00		97	0-200		
Chloromethane	**4.88**		µg/kg		5.00		98	0-200		
2-Chlorotoluene	**4.29**		µg/kg		5.00		86	0-200		
4-Chlorotoluene	**4.13**		µg/kg		5.00		83	0-200		
1,2-Dibromo-3-chloropropane	**4.28**		µg/kg		5.00		86	0-200		
Dibromochloromethane	**3.96**		µg/kg		5.00		79	0-200		
1,2-Dibromoethane (EDB)	**4.44**		µg/kg		5.00		89	0-200		
Dibromomethane	**4.82**		µg/kg		5.00		96	0-200		
1,2-Dichlorobenzene	**4.48**		µg/kg		5.00		90	0-200		
1,3-Dichlorobenzene	**4.17**		µg/kg		5.00		83	0-200		
1,4-Dichlorobenzene	**4.53**		µg/kg		5.00		91	0-200		
Dichlorodifluoromethane (Freon12)	**3.81**		µg/kg		5.00		76	0-200		
1,1-Dichloroethane	**4.98**		µg/kg		5.00		100	0-200		
1,2-Dichloroethane	**4.77**		µg/kg		5.00		95	0-200		
1,1-Dichloroethene	**4.53**		µg/kg		5.00		91	0-200		
cis-1,2-Dichloroethene	**4.56**		µg/kg		5.00		91	0-200		
trans-1,2-Dichloroethene	**4.73**		µg/kg		5.00		95	0-200		
1,2-Dichloropropane	**4.91**		µg/kg		5.00		98	0-200		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001826 - SW846 5035A Soil (low level)										
MRL Check (2001826-MRL1)					Prepared & Analyzed: 28-Sep-20					
1,3-Dichloropropane	**4.47**		µg/kg		5.00		89	0-200		
2,2-Dichloropropane	**4.11**		µg/kg		5.00		82	0-200		
1,1-Dichloropropene	**4.46**		µg/kg		5.00		89	0-200		
cis-1,3-Dichloropropene	**4.06**		µg/kg		5.00		81	0-200		
trans-1,3-Dichloropropene	**4.23**		µg/kg		5.00		85	0-200		
Ethylbenzene	**7.78**		µg/kg		5.00		156	0-200		
Hexachlorobutadiene	**4.38**		µg/kg		5.00		88	0-200		
2-Hexanone (MBK)	**4.92**		µg/kg		5.00		98	0-200		
Isopropylbenzene	**4.10**		µg/kg		5.00		82	0-200		
4-Isopropyltoluene	**4.15**		µg/kg		5.00		83	0-200		
Methyl tert-butyl ether	**4.51**		µg/kg		5.00		90	0-200		
4-Methyl-2-pentanone (MIBK)	**5.13**		µg/kg		5.00		103	0-200		
Methylene chloride	**7.36**		µg/kg		5.00		147	0-200		
Naphthalene	**4.59**		µg/kg		5.00		92	0-200		
n-Propylbenzene	**5.39**		µg/kg		5.00		108	0-200		
Styrene	**3.68**		µg/kg		5.00		74	0-200		
1,1,1,2-Tetrachloroethane	**4.28**		µg/kg		5.00		86	0-200		
1,1,2,2-Tetrachloroethane	**4.78**		µg/kg		5.00		96	0-200		
Tetrachloroethene	**4.63**		µg/kg		5.00		93	0-200		
Toluene	**5.51**		µg/kg		5.00		110	0-200		
1,2,3-Trichlorobenzene	**4.29**		µg/kg		5.00		86	0-200		
1,2,4-Trichlorobenzene	**4.33**		µg/kg		5.00		87	0-200		
1,3,5-Trichlorobenzene	**4.33**		µg/kg		5.00		87	0-200		
1,1,1-Trichloroethane	**4.25**		µg/kg		5.00		85	0-200		
1,1,2-Trichloroethane	**4.89**		µg/kg		5.00		98	0-200		
Trichloroethene	**4.40**		µg/kg		5.00		88	0-200		
Trichlorofluoromethane (Freon 11)	**6.74**		µg/kg		5.00		135	0-200		
1,2,3-Trichloropropane	**4.42**		µg/kg		5.00		88	0-200		
1,2,4-Trimethylbenzene	**9.77**		µg/kg		5.00		195	0-200		
1,3,5-Trimethylbenzene	**5.29**		µg/kg		5.00		106	0-200		
Vinyl chloride	**4.33**		µg/kg		5.00		87	0-200		
m,p-Xylene	**18.9**		µg/kg		10.0		189	0-200		
o-Xylene	**6.33**		µg/kg		5.00		127	0-200		
Tetrahydrofuran	**4.04**		µg/kg		5.00		81	0-200		
Ethyl ether	**4.83**		µg/kg		5.00		97	0-200		
Tert-amyl methyl ether	**5.68**		µg/kg		5.00		114	0-200		
Ethyl tert-butyl ether	**4.26**		µg/kg		5.00		85	0-200		
Di-isopropyl ether	**4.48**		µg/kg		5.00		90	0-200		
Tert-Butanol / butyl alcohol	**52.3**		µg/kg		50.0		105	0-200		
1,4-Dioxane	**41.2**		µg/kg		50.0		82	0-200		
trans-1,4-Dichloro-2-butene	**3.70**		µg/kg		5.00		74	0-200		
Ethanol	**190**		µg/kg		100		190	0-200		
Surrogate: 4-Bromofluorobenzene	*48.4*		µg/kg wet		*50.0*		*97*	*70-130*		
Surrogate: Toluene-d8	*52.2*		µg/kg wet		*50.0*		*104*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.9*		µg/kg wet		*50.0*		*110*	*70-130*		
Surrogate: Dibromofluoromethane	*50.7*		µg/kg wet		*50.0*		*101*	*70-130*		
Batch 2001880 - SW846 5035A Soil (low level)										
Blank (2001880-BLK1)					Prepared & Analyzed: 29-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00		µg/kg wet	5.00						
Acetone	< 50.0		µg/kg wet	50.0						

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Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

Blank (2001880-BLK1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acrylonitrile	< 5.00		µg/kg wet	5.00						
Benzene	< 5.00		µg/kg wet	5.00						
Bromobenzene	< 5.00		µg/kg wet	5.00						
Bromochloromethane	< 5.00		µg/kg wet	5.00						
Bromodichloromethane	< 5.00		µg/kg wet	5.00						
Bromoform	< 5.00		µg/kg wet	5.00						
Bromomethane	< 10.0		µg/kg wet	10.0						
n-Butylbenzene	< 10.0		µg/kg wet	10.0						
sec-Butylbenzene	< 5.00		µg/kg wet	5.00						
tert-Butylbenzene	< 5.00		µg/kg wet	5.00						
Carbon disulfide	< 10.0		µg/kg wet	10.0						
Carbon tetrachloride	< 5.00		µg/kg wet	5.00						
Chlorobenzene	< 5.00		µg/kg wet	5.00						
Chloroethane	< 10.0		µg/kg wet	10.0						
Chloroform	< 5.00		µg/kg wet	5.00						
Chloromethane	< 10.0		µg/kg wet	10.0						
2-Chlorotoluene	< 5.00		µg/kg wet	5.00						
4-Chlorotoluene	< 5.00		µg/kg wet	5.00						
1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0						
Dibromochloromethane	< 5.00		µg/kg wet	5.00						
1,2-Dibromoethane (EDB)	< 5.00		µg/kg wet	5.00						
Dibromomethane	< 5.00		µg/kg wet	5.00						
1,2-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
1,4-Dichlorobenzene	< 5.00		µg/kg wet	5.00						
Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0						
1,1-Dichloroethane	< 5.00		µg/kg wet	5.00						
1,2-Dichloroethane	< 5.00		µg/kg wet	5.00						
1,1-Dichloroethene	< 5.00		µg/kg wet	5.00						
cis-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
trans-1,2-Dichloroethene	< 5.00		µg/kg wet	5.00						
1,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,3-Dichloropropane	< 5.00		µg/kg wet	5.00						
2,2-Dichloropropane	< 5.00		µg/kg wet	5.00						
1,1-Dichloropropene	< 5.00		µg/kg wet	5.00						
cis-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
trans-1,3-Dichloropropene	< 5.00		µg/kg wet	5.00						
Ethylbenzene	< 5.00		µg/kg wet	5.00						
Hexachlorobutadiene	< 10.0		µg/kg wet	10.0						
2-Hexanone (MBK)	< 10.0		µg/kg wet	10.0						
Isopropylbenzene	< 5.00		µg/kg wet	5.00						
4-Isopropyltoluene	< 5.00		µg/kg wet	5.00						
Methyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/kg wet	10.0						
Methylene chloride	< 10.0		µg/kg wet	10.0						
Naphthalene	< 5.00		µg/kg wet	5.00						
n-Propylbenzene	< 5.00		µg/kg wet	5.00						
Styrene	< 5.00		µg/kg wet	5.00						
1,1,1,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						
1,1,2,2-Tetrachloroethane	< 5.00		µg/kg wet	5.00						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001880 - SW846 5035A Soil (low level)										
Blank (2001880-BLK1)					Prepared & Analyzed: 29-Sep-20					
Tetrachloroethene	< 5.00		µg/kg wet	5.00						
Toluene	< 5.00		µg/kg wet	5.00						
1,2,3-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trichlorobenzene	< 5.00		µg/kg wet	5.00						
1,1,1-Trichloroethane	< 5.00		µg/kg wet	5.00						
1,1,2-Trichloroethane	< 5.00		µg/kg wet	5.00						
Trichloroethene	< 5.00		µg/kg wet	5.00						
Trichlorofluoromethane (Freon 11)	< 5.00		µg/kg wet	5.00						
1,2,3-Trichloropropane	< 5.00		µg/kg wet	5.00						
1,2,4-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
1,3,5-Trimethylbenzene	< 5.00		µg/kg wet	5.00						
Vinyl chloride	< 5.00		µg/kg wet	5.00						
m,p-Xylene	< 10.0		µg/kg wet	10.0						
o-Xylene	< 5.00		µg/kg wet	5.00						
Tetrahydrofuran	< 10.0		µg/kg wet	10.0						
Ethyl ether	< 5.00		µg/kg wet	5.00						
Tert-amyl methyl ether	< 5.00		µg/kg wet	5.00						
Ethyl tert-butyl ether	< 5.00		µg/kg wet	5.00						
Di-isopropyl ether	< 5.00		µg/kg wet	5.00						
Tert-Butanol / butyl alcohol	< 100		µg/kg wet	100						
1,4-Dioxane	< 100		µg/kg wet	100						
trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0						
Ethanol	< 1000		µg/kg wet	1000						
Surrogate: 4-Bromofluorobenzene	*47.3*		µg/kg wet		*50.0*		*95*	*70-130*		
Surrogate: Toluene-d8	*51.4*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.2*		µg/kg wet		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*51.0*		µg/kg wet		*50.0*		*102*	*70-130*		
LCS (2001880-BS1)					Prepared & Analyzed: 29-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**18.5**		µg/kg		20.0		92	70-130		
Acetone	**7.81**	QC6	µg/kg		20.0		39	70-130		
Acrylonitrile	**17.5**		µg/kg		20.0		87	70-130		
Benzene	**19.5**		µg/kg		20.0		97	70-130		
Bromobenzene	**20.4**		µg/kg		20.0		102	70-130		
Bromochloromethane	**19.3**		µg/kg		20.0		96	70-130		
Bromodichloromethane	**19.7**		µg/kg		20.0		98	70-130		
Bromoform	**19.7**		µg/kg		20.0		98	70-130		
Bromomethane	**22.2**		µg/kg		20.0		111	70-130		
n-Butylbenzene	**19.7**		µg/kg		20.0		98	70-130		
sec-Butylbenzene	**19.6**		µg/kg		20.0		98	70-130		
tert-Butylbenzene	**19.8**		µg/kg		20.0		99	70-130		
Carbon disulfide	**19.6**		µg/kg		20.0		98	70-130		
Carbon tetrachloride	**18.8**		µg/kg		20.0		94	70-130		
Chlorobenzene	**20.2**		µg/kg		20.0		101	70-130		
Chloroethane	**105**	BsH, QC6	µg/kg		20.0		525	70-130		
Chloroform	**19.8**		µg/kg		20.0		99	70-130		
Chloromethane	**20.3**		µg/kg		20.0		102	70-130		
2-Chlorotoluene	**18.2**		µg/kg		20.0		91	70-130		
4-Chlorotoluene	**19.2**		µg/kg		20.0		96	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

LCS (2001880-BS1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dibromo-3-chloropropane	**18.5**		µg/kg		20.0		92	70-130		
Dibromochloromethane	**19.2**		µg/kg		20.0		96	70-130		
1,2-Dibromoethane (EDB)	**19.3**		µg/kg		20.0		97	70-130		
Dibromomethane	**18.9**		µg/kg		20.0		94	70-130		
1,2-Dichlorobenzene	**20.5**		µg/kg		20.0		102	70-130		
1,3-Dichlorobenzene	**20.4**		µg/kg		20.0		102	70-130		
1,4-Dichlorobenzene	**20.0**		µg/kg		20.0		100	70-130		
Dichlorodifluoromethane (Freon12)	**18.5**		µg/kg		20.0		92	70-130		
1,1-Dichloroethane	**19.8**		µg/kg		20.0		99	70-130		
1,2-Dichloroethane	**19.8**		µg/kg		20.0		99	70-130		
1,1-Dichloroethene	**18.6**		µg/kg		20.0		93	70-130		
cis-1,2-Dichloroethene	**19.4**		µg/kg		20.0		97	70-130		
trans-1,2-Dichloroethene	**19.5**		µg/kg		20.0		98	70-130		
1,2-Dichloropropane	**19.8**		µg/kg		20.0		99	70-130		
1,3-Dichloropropane	**19.4**		µg/kg		20.0		97	70-130		
2,2-Dichloropropane	**19.3**		µg/kg		20.0		96	70-130		
1,1-Dichloropropene	**18.7**		µg/kg		20.0		93	70-130		
cis-1,3-Dichloropropene	**18.8**		µg/kg		20.0		94	70-130		
trans-1,3-Dichloropropene	**17.9**		µg/kg		20.0		89	70-130		
Ethylbenzene	**19.6**		µg/kg		20.0		98	70-130		
Hexachlorobutadiene	**20.2**		µg/kg		20.0		101	70-130		
2-Hexanone (MBK)	**16.6**		µg/kg		20.0		83	70-130		
Isopropylbenzene	**19.4**		µg/kg		20.0		97	70-130		
4-Isopropyltoluene	**19.2**		µg/kg		20.0		96	70-130		
Methyl tert-butyl ether	**18.1**		µg/kg		20.0		91	70-130		
4-Methyl-2-pentanone (MIBK)	**17.9**		µg/kg		20.0		89	70-130		
Methylene chloride	**17.4**		µg/kg		20.0		87	70-130		
Naphthalene	**18.8**		µg/kg		20.0		94	70-130		
n-Propylbenzene	**20.0**		µg/kg		20.0		100	70-130		
Styrene	**19.4**		µg/kg		20.0		97	70-130		
1,1,1,2-Tetrachloroethane	**20.0**		µg/kg		20.0		100	70-130		
1,1,2,2-Tetrachloroethane	**19.5**		µg/kg		20.0		97	70-130		
Tetrachloroethene	**19.6**		µg/kg		20.0		98	70-130		
Toluene	**19.8**		µg/kg		20.0		99	70-130		
1,2,3-Trichlorobenzene	**20.3**		µg/kg		20.0		102	70-130		
1,2,4-Trichlorobenzene	**19.9**		µg/kg		20.0		100	70-130		
1,3,5-Trichlorobenzene	**20.1**		µg/kg		20.0		101	70-130		
1,1,1-Trichloroethane	**19.7**		µg/kg		20.0		98	70-130		
1,1,2-Trichloroethane	**19.5**		µg/kg		20.0		97	70-130		
Trichloroethene	**19.1**		µg/kg		20.0		95	70-130		
Trichlorofluoromethane (Freon 11)	**17.5**		µg/kg		20.0		88	70-130		
1,2,3-Trichloropropane	**18.0**		µg/kg		20.0		90	70-130		
1,2,4-Trimethylbenzene	**19.7**		µg/kg		20.0		99	70-130		
1,3,5-Trimethylbenzene	**19.4**		µg/kg		20.0		97	70-130		
Vinyl chloride	**21.7**		µg/kg		20.0		108	70-130		
m,p-Xylene	**37.6**		µg/kg		40.0		94	70-130		
o-Xylene	**19.1**		µg/kg		20.0		96	70-130		
Tetrahydrofuran	**15.6**		µg/kg		20.0		78	70-130		
Ethyl ether	**18.0**		µg/kg		20.0		90	70-130		
Tert-amyl methyl ether	**20.1**		µg/kg		20.0		101	70-130		

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (2001880-BS1)					Prepared & Analyzed: 29-Sep-20					
Ethyl tert-butyl ether	**18.4**		µg/kg		20.0		92	70-130		
Di-isopropyl ether	**18.6**		µg/kg		20.0		93	70-130		
Tert-Butanol / butyl alcohol	**160**		µg/kg		200		80	70-130		
1,4-Dioxane	**172**		µg/kg		200		86	70-130		
trans-1,4-Dichloro-2-butene	**18.6**		µg/kg		20.0		93	70-130		
Ethanol	**281**		µg/kg		400		70	70-130		
Surrogate: 4-Bromofluorobenzene	*49.3*		µg/kg wet		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.7*		µg/kg wet		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.2*		µg/kg wet		*50.0*		*98*	*70-130*		
Surrogate: Dibromofluoromethane	*49.3*		µg/kg wet		*50.0*		*99*	*70-130*		
LCS Dup (2001880-BSD1)					Prepared & Analyzed: 29-Sep-20					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**18.9**		µg/kg		20.0		95	70-130	3	30
Acetone	**10.0**	QC6	µg/kg		20.0		50	70-130	25	30
Acrylonitrile	**19.2**		µg/kg		20.0		96	70-130	9	30
Benzene	**20.3**		µg/kg		20.0		101	70-130	4	30
Bromobenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
Bromochloromethane	**19.8**		µg/kg		20.0		99	70-130	3	30
Bromodichloromethane	**20.2**		µg/kg		20.0		101	70-130	3	30
Bromoform	**19.4**		µg/kg		20.0		97	70-130	1	30
Bromomethane	**22.0**		µg/kg		20.0		110	70-130	0.8	30
n-Butylbenzene	**20.4**		µg/kg		20.0		102	70-130	3	30
sec-Butylbenzene	**19.5**		µg/kg		20.0		98	70-130	0.5	30
tert-Butylbenzene	**19.5**		µg/kg		20.0		97	70-130	2	30
Carbon disulfide	**20.1**		µg/kg		20.0		101	70-130	3	30
Carbon tetrachloride	**19.6**		µg/kg		20.0		98	70-130	4	30
Chlorobenzene	**19.9**		µg/kg		20.0		99	70-130	2	30
Chloroethane	**108**	BsH, QC6	µg/kg		20.0		541	70-130	3	30
Chloroform	**19.9**		µg/kg		20.0		100	70-130	0.7	30
Chloromethane	**21.1**		µg/kg		20.0		106	70-130	4	30
2-Chlorotoluene	**18.3**		µg/kg		20.0		92	70-130	0.5	30
4-Chlorotoluene	**19.2**		µg/kg		20.0		96	70-130	0.2	30
1,2-Dibromo-3-chloropropane	**18.7**		µg/kg		20.0		93	70-130	1	30
Dibromochloromethane	**19.5**		µg/kg		20.0		97	70-130	1	30
1,2-Dibromoethane (EDB)	**19.7**		µg/kg		20.0		99	70-130	2	30
Dibromomethane	**18.8**		µg/kg		20.0		94	70-130	0.4	30
1,2-Dichlorobenzene	**20.3**		µg/kg		20.0		101	70-130	1	30
1,3-Dichlorobenzene	**19.8**		µg/kg		20.0		99	70-130	3	30
1,4-Dichlorobenzene	**20.2**		µg/kg		20.0		101	70-130	1	30
Dichlorodifluoromethane (Freon12)	**19.0**		µg/kg		20.0		95	70-130	3	30
1,1-Dichloroethane	**21.3**		µg/kg		20.0		107	70-130	8	30
1,2-Dichloroethane	**20.7**		µg/kg		20.0		104	70-130	5	30
1,1-Dichloroethene	**18.9**		µg/kg		20.0		94	70-130	2	30
cis-1,2-Dichloroethene	**20.2**		µg/kg		20.0		101	70-130	4	30
trans-1,2-Dichloroethene	**20.1**		µg/kg		20.0		101	70-130	3	30
1,2-Dichloropropane	**20.6**		µg/kg		20.0		103	70-130	4	30
1,3-Dichloropropane	**19.6**		µg/kg		20.0		98	70-130	0.8	30
2,2-Dichloropropane	**19.6**		µg/kg		20.0		98	70-130	2	30
1,1-Dichloropropene	**20.0**		µg/kg		20.0		100	70-130	7	30
cis-1,3-Dichloropropene	**19.7**		µg/kg		20.0		99	70-130	5	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

LCS Dup (2001880-BSD1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	**18.5**		µg/kg		20.0		93	70-130	4	30
Ethylbenzene	**19.5**		µg/kg		20.0		98	70-130	0.3	30
Hexachlorobutadiene	**19.2**		µg/kg		20.0		96	70-130	5	30
2-Hexanone (MBK)	**18.6**		µg/kg		20.0		93	70-130	11	30
Isopropylbenzene	**19.4**		µg/kg		20.0		97	70-130	0	30
4-Isopropyltoluene	**19.7**		µg/kg		20.0		98	70-130	3	30
Methyl tert-butyl ether	**19.0**		µg/kg		20.0		95	70-130	5	30
4-Methyl-2-pentanone (MIBK)	**19.3**		µg/kg		20.0		96	70-130	7	30
Methylene chloride	**17.8**		µg/kg		20.0		89	70-130	2	30
Naphthalene	**18.9**		µg/kg		20.0		95	70-130	0.6	30
n-Propylbenzene	**20.2**		µg/kg		20.0		101	70-130	1	30
Styrene	**19.4**		µg/kg		20.0		97	70-130	0	30
1,1,1,2-Tetrachloroethane	**19.6**		µg/kg		20.0		98	70-130	2	30
1,1,2,2-Tetrachloroethane	**19.6**		µg/kg		20.0		98	70-130	0.7	30
Tetrachloroethene	**19.3**		µg/kg		20.0		96	70-130	2	30
Toluene	**20.0**		µg/kg		20.0		100	70-130	0.9	30
1,2,3-Trichlorobenzene	**19.6**		µg/kg		20.0		98	70-130	4	30
1,2,4-Trichlorobenzene	**19.3**		µg/kg		20.0		97	70-130	3	30
1,3,5-Trichlorobenzene	**19.4**		µg/kg		20.0		97	70-130	4	30
1,1,1-Trichloroethane	**20.0**		µg/kg		20.0		100	70-130	2	30
1,1,2-Trichloroethane	**20.3**		µg/kg		20.0		101	70-130	4	30
Trichloroethene	**19.7**		µg/kg		20.0		99	70-130	3	30
Trichlorofluoromethane (Freon 11)	**17.5**		µg/kg		20.0		87	70-130	0.3	30
1,2,3-Trichloropropane	**18.8**		µg/kg		20.0		94	70-130	5	30
1,2,4-Trimethylbenzene	**19.9**		µg/kg		20.0		99	70-130	0.8	30
1,3,5-Trimethylbenzene	**19.4**		µg/kg		20.0		97	70-130	0.3	30
Vinyl chloride	**22.9**		µg/kg		20.0		115	70-130	6	30
m,p-Xylene	**37.5**		µg/kg		40.0		94	70-130	0.3	30
o-Xylene	**19.3**		µg/kg		20.0		96	70-130	1	30
Tetrahydrofuran	**17.0**		µg/kg		20.0		85	70-130	9	30
Ethyl ether	**19.0**		µg/kg		20.0		95	70-130	5	30
Tert-amyl methyl ether	**21.0**		µg/kg		20.0		105	70-130	4	30
Ethyl tert-butyl ether	**19.4**		µg/kg		20.0		97	70-130	5	30
Di-isopropyl ether	**20.2**		µg/kg		20.0		101	70-130	8	30
Tert-Butanol / butyl alcohol	**168**		µg/kg		200		84	70-130	5	30
1,4-Dioxane	**166**		µg/kg		200		83	70-130	4	30
trans-1,4-Dichloro-2-butene	**18.8**		µg/kg		20.0		94	70-130	1	30
Ethanol	**298**		µg/kg		400		74	70-130	6	30
Surrogate: 4-Bromofluorobenzene	*49.2*		µg/kg wet		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*51.6*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.7*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane	*50.5*		µg/kg wet		*50.0*		*101*	*70-130*		

MRL Check (2001880-MRL1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	**5.13**		µg/kg		5.00		103	0-200		
Acetone	**0.00**		µg/kg		5.00			0-200		
Acrylonitrile	**5.32**		µg/kg		5.00		106	0-200		
Benzene	**4.96**		µg/kg		5.00		99	0-200		
Bromobenzene	**4.93**		µg/kg		5.00		99	0-200		
Bromochloromethane	**5.47**		µg/kg		5.00		109	0-200		
Bromodichloromethane	**5.89**		µg/kg		5.00		118	0-200		

Volatile Organic Compounds - Quality Control

SW846 8260C LLS

Batch 2001880 - SW846 5035A Soil (low level)

MRL Check (2001880-MRL1) Prepared & Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Bromoform	**5.24**		µg/kg		5.00		105	0-200		
Bromomethane	**6.79**		µg/kg		5.00		136	0-200		
2-Butanone (MEK)	**0.00**		µg/kg		5.00			0-200		
n-Butylbenzene	**5.10**		µg/kg		5.00		102	0-200		
sec-Butylbenzene	**4.94**		µg/kg		5.00		99	0-200		
tert-Butylbenzene	**4.25**		µg/kg		5.00		85	0-200		
Carbon disulfide	**5.57**		µg/kg		5.00		111	0-200		
Carbon tetrachloride	**4.64**		µg/kg		5.00		93	0-200		
Chlorobenzene	**5.35**		µg/kg		5.00		107	0-200		
Chloroethane	**29.4**		µg/kg		5.00		588	0-200		
Chloroform	**5.62**		µg/kg		5.00		112	0-200		
Chloromethane	**5.07**		µg/kg		5.00		101	0-200		
2-Chlorotoluene	**5.02**		µg/kg		5.00		100	0-200		
4-Chlorotoluene	**4.96**		µg/kg		5.00		99	0-200		
1,2-Dibromo-3-chloropropane	**5.23**		µg/kg		5.00		105	0-200		
Dibromochloromethane	**4.93**		µg/kg		5.00		99	0-200		
1,2-Dibromoethane (EDB)	**5.35**		µg/kg		5.00		107	0-200		
Dibromomethane	**4.89**		µg/kg		5.00		98	0-200		
1,2-Dichlorobenzene	**5.62**		µg/kg		5.00		112	0-200		
1,3-Dichlorobenzene	**5.34**		µg/kg		5.00		107	0-200		
1,4-Dichlorobenzene	**5.70**		µg/kg		5.00		114	0-200		
Dichlorodifluoromethane (Freon12)	**4.53**		µg/kg		5.00		91	0-200		
1,1-Dichloroethane	**5.57**		µg/kg		5.00		111	0-200		
1,2-Dichloroethane	**5.37**		µg/kg		5.00		107	0-200		
1,1-Dichloroethene	**4.97**		µg/kg		5.00		99	0-200		
cis-1,2-Dichloroethene	**4.77**		µg/kg		5.00		95	0-200		
trans-1,2-Dichloroethene	**5.22**		µg/kg		5.00		104	0-200		
1,2-Dichloropropane	**5.51**		µg/kg		5.00		110	0-200		
1,3-Dichloropropane	**5.30**		µg/kg		5.00		106	0-200		
2,2-Dichloropropane	**4.97**		µg/kg		5.00		99	0-200		
1,1-Dichloropropene	**4.59**		µg/kg		5.00		92	0-200		
cis-1,3-Dichloropropene	**4.74**		µg/kg		5.00		95	0-200		
trans-1,3-Dichloropropene	**4.55**		µg/kg		5.00		91	0-200		
Ethylbenzene	**5.14**		µg/kg		5.00		103	0-200		
Hexachlorobutadiene	**5.19**		µg/kg		5.00		104	0-200		
2-Hexanone (MBK)	**5.06**		µg/kg		5.00		101	0-200		
Isopropylbenzene	**4.85**		µg/kg		5.00		97	0-200		
4-Isopropyltoluene	**4.63**		µg/kg		5.00		93	0-200		
Methyl tert-butyl ether	**4.53**		µg/kg		5.00		91	0-200		
4-Methyl-2-pentanone (MIBK)	**5.26**		µg/kg		5.00		105	0-200		
Methylene chloride	**5.10**		µg/kg		5.00		102	0-200		
Naphthalene	**4.64**		µg/kg		5.00		93	0-200		
n-Propylbenzene	**5.99**		µg/kg		5.00		120	0-200		
Styrene	**4.46**		µg/kg		5.00		89	0-200		
1,1,1,2-Tetrachloroethane	**5.13**		µg/kg		5.00		103	0-200		
1,1,2,2-Tetrachloroethane	**5.91**		µg/kg		5.00		118	0-200		
Tetrachloroethene	**4.66**		µg/kg		5.00		93	0-200		
Toluene	**5.05**		µg/kg		5.00		101	0-200		
1,2,3-Trichlorobenzene	**5.06**		µg/kg		5.00		101	0-200		
1,2,4-Trichlorobenzene	**5.31**		µg/kg		5.00		106	0-200		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C LLS										
Batch 2001880 - SW846 5035A Soil (low level)										
MRL Check (2001880-MRL1)					Prepared & Analyzed: 29-Sep-20					
1,3,5-Trichlorobenzene	**5.30**		µg/kg		5.00		106	0-200		
1,1,1-Trichloroethane	**5.01**		µg/kg		5.00		100	0-200		
1,1,2-Trichloroethane	**6.33**		µg/kg		5.00		127	0-200		
Trichloroethene	**4.89**		µg/kg		5.00		98	0-200		
Trichlorofluoromethane (Freon 11)	**4.54**		µg/kg		5.00		91	0-200		
1,2,3-Trichloropropane	**5.32**		µg/kg		5.00		106	0-200		
1,2,4-Trimethylbenzene	**4.67**		µg/kg		5.00		93	0-200		
1,3,5-Trimethylbenzene	**4.40**		µg/kg		5.00		88	0-200		
Vinyl chloride	**5.85**		µg/kg		5.00		117	0-200		
m,p-Xylene	**8.95**		µg/kg		10.0		90	0-200		
o-Xylene	**4.49**		µg/kg		5.00		90	0-200		
Tetrahydrofuran	**4.60**		µg/kg		5.00		92	0-200		
Ethyl ether	**4.62**		µg/kg		5.00		92	0-200		
Tert-amyl methyl ether	**6.14**		µg/kg		5.00		123	0-200		
Ethyl tert-butyl ether	**4.79**		µg/kg		5.00		96	0-200		
Di-isopropyl ether	**4.94**		µg/kg		5.00		99	0-200		
Tert-Butanol / butyl alcohol	**52.0**		µg/kg		50.0		104	0-200		
1,4-Dioxane	**43.5**		µg/kg		50.0		87	0-200		
trans-1,4-Dichloro-2-butene	**4.44**		µg/kg		5.00		89	0-200		
Ethanol	**86.1**		µg/kg		100		86	0-200		
Surrogate: 4-Bromofluorobenzene	*47.2*		µg/kg wet		*50.0*		*94*	*70-130*		
Surrogate: Toluene-d8	*51.0*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.0*		µg/kg wet		*50.0*		*106*	*70-130*		
Surrogate: Dibromofluoromethane	*50.3*		µg/kg wet		*50.0*		*101*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Blank (2001800-BLK1)					Prepared & Analyzed: 22-Sep-20					
Acenaphthene	< 66.7		µg/kg wet	66.7						
Acenaphthylene	< 66.7		µg/kg wet	66.7						
Aniline	< 330		µg/kg wet	330						
Anthracene	< 66.7		µg/kg wet	66.7						
Azobenzene/Diphenyldiazene	< 330		µg/kg wet	330						
Benzidine	< 660		µg/kg wet	660						
Benzo (a) anthracene	< 66.7		µg/kg wet	66.7						
Benzo (a) pyrene	< 66.7		µg/kg wet	66.7						
Benzo (b) fluoranthene	< 66.7		µg/kg wet	66.7						
Benzo (g,h,i) perylene	< 66.7		µg/kg wet	66.7						
Benzo (k) fluoranthene	< 66.7		µg/kg wet	66.7						
Benzoic acid	< 330		µg/kg wet	330						
Benzyl alcohol	< 330		µg/kg wet	330						
Bis(2-chloroethoxy)methane	< 330		µg/kg wet	330						
Bis(2-chloroethyl)ether	< 167		µg/kg wet	167						
Bis(2-chloroisopropyl)ether	< 167		µg/kg wet	167						
Bis(2-ethylhexyl)phthalate	< 167		µg/kg wet	167						
4-Bromophenyl phenyl ether	< 330		µg/kg wet	330						
Butyl benzyl phthalate	< 330		µg/kg wet	330						
Carbazole	< 167		µg/kg wet	167						
4-Chloro-3-methylphenol	< 330		µg/kg wet	330						
4-Chloroaniline	< 167		µg/kg wet	167						
2-Chloronaphthalene	< 330		µg/kg wet	330						
2-Chlorophenol	< 167		µg/kg wet	167						
4-Chlorophenyl phenyl ether	< 330		µg/kg wet	330						
Chrysene	< 66.7		µg/kg wet	66.7						
Dibenzo (a,h) anthracene	< 66.7		µg/kg wet	66.7						
Dibenzofuran	< 167		µg/kg wet	167						
1,2-Dichlorobenzene	< 330		µg/kg wet	330						
1,3-Dichlorobenzene	< 330		µg/kg wet	330						
1,4-Dichlorobenzene	< 330		µg/kg wet	330						
3,3´-Dichlorobenzidine	< 330		µg/kg wet	330						
2,4-Dichlorophenol	< 167		µg/kg wet	167						
Diethyl phthalate	< 330		µg/kg wet	330						
Dimethyl phthalate	< 330		µg/kg wet	330						
2,4-Dimethylphenol	< 330		µg/kg wet	330						
Di-n-butyl phthalate	< 330		µg/kg wet	330						
4,6-Dinitro-2-methylphenol	< 330		µg/kg wet	330						
2,4-Dinitrophenol	< 330		µg/kg wet	330						
2,4-Dinitrotoluene	< 167		µg/kg wet	167						
2,6-Dinitrotoluene	< 167		µg/kg wet	167						
Di-n-octyl phthalate	< 330		µg/kg wet	330						
Fluoranthene	< 66.7		µg/kg wet	66.7						
Fluorene	< 66.7		µg/kg wet	66.7						
Hexachlorobenzene	< 167		µg/kg wet	167						
Hexachlorobutadiene	< 167		µg/kg wet	167						
Hexachlorocyclopentadiene	< 167		µg/kg wet	167						
Hexachloroethane	< 167		µg/kg wet	167						
Indeno (1,2,3-cd) pyrene	< 66.7		µg/kg wet	66.7						
Isophorone	< 167		µg/kg wet	167						

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Blank (2001800-BLK1)					Prepared & Analyzed: 22-Sep-20					
2-Methylnaphthalene	< 66.7		µg/kg wet	66.7						
2-Methylphenol	< 330		µg/kg wet	330						
3 & 4-Methylphenol	< 330		µg/kg wet	330						
Naphthalene	< 66.7		µg/kg wet	66.7						
2-Nitroaniline	< 330		µg/kg wet	330						
3-Nitroaniline	< 330		µg/kg wet	330						
4-Nitroaniline	< 167		µg/kg wet	167						
Nitrobenzene	< 167		µg/kg wet	167						
2-Nitrophenol	< 167		µg/kg wet	167						
4-Nitrophenol	< 1320		µg/kg wet	1320						
N-Nitrosodimethylamine	< 167		µg/kg wet	167						
N-Nitrosodi-n-propylamine	< 167		µg/kg wet	167						
N-Nitrosodiphenylamine	< 330		µg/kg wet	330						
Pentachlorophenol	< 330		µg/kg wet	330						
Phenanthrene	< 66.7		µg/kg wet	66.7						
Phenol	< 330		µg/kg wet	330						
Pyrene	< 66.7		µg/kg wet	66.7						
Pyridine	< 330		µg/kg wet	330						
1,2,4-Trichlorobenzene	< 330		µg/kg wet	330						
1-Methylnaphthalene	< 66.7		µg/kg wet	66.7						
2,4,5-Trichlorophenol	< 330		µg/kg wet	330						
2,4,6-Trichlorophenol	< 167		µg/kg wet	167						
Pentachloronitrobenzene	< 330		µg/kg wet	330						
1,2,4,5-Tetrachlorobenzene	< 330		µg/kg wet	330						
Surrogate: 2-Fluorobiphenyl	*731*		µg/kg wet		*1670*		*44*	*30-130*		
Surrogate: 2-Fluorophenol	*1200*		µg/kg wet		*1670*		*72*	*30-130*		
Surrogate: Nitrobenzene-d5	*1370*		µg/kg wet		*1670*		*82*	*30-130*		
Surrogate: Phenol-d5	*1160*		µg/kg wet		*1670*		*70*	*30-130*		
Surrogate: Terphenyl-dl4	*1140*		µg/kg wet		*1670*		*68*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1020*		µg/kg wet		*1670*		*61*	*30-130*		
LCS (2001800-BS1)					Prepared & Analyzed: 22-Sep-20					
Acenaphthene	**946**		µg/kg wet	66.7	1670		57	40-140		
Acenaphthylene	**1120**		µg/kg wet	66.7	1670		67	40-140		
Aniline	**656**	QC6	µg/kg wet	330	1670		39	40-140		
Anthracene	**1210**		µg/kg wet	66.7	1670		73	40-140		
Azobenzene/Diphenyldiazene	**1440**		µg/kg wet	330	1670		87	40-140		
Benzidine	**211**	QC6	µg/kg wet	660	1670		13	40-140		
Benzo (a) anthracene	**1350**		µg/kg wet	66.7	1670		81	40-140		
Benzo (a) pyrene	**1430**		µg/kg wet	66.7	1670		86	40-140		
Benzo (b) fluoranthene	**1550**		µg/kg wet	66.7	1670		93	40-140		
Benzo (g,h,i) perylene	**1490**		µg/kg wet	66.7	1670		89	40-140		
Benzo (k) fluoranthene	**1230**		µg/kg wet	66.7	1670		74	40-140		
Benzoic acid	**262**	QC6	µg/kg wet	330	1670		16	30-130		
Benzyl alcohol	**1070**		µg/kg wet	330	1670		64	40-140		
Bis(2-chloroethoxy)methane	**1220**		µg/kg wet	330	1670		73	40-140		
Bis(2-chloroethyl)ether	**1060**		µg/kg wet	167	1670		64	40-140		
Bis(2-chloroisopropyl)ether	**874**		µg/kg wet	167	1670		52	40-140		
Bis(2-ethylhexyl)phthalate	**1260**		µg/kg wet	167	1670		76	40-140		
4-Bromophenyl phenyl ether	**329**	QC6	µg/kg wet	330	1670		20	40-140		
Butyl benzyl phthalate	**1330**		µg/kg wet	330	1670		80	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

SW846 8270D

Batch 2001800 - SW846 3546

LCS (2001800-BS1) Prepared & Analyzed: 22-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Carbazole	**1290**		µg/kg wet	167	1670		77	40-140		
4-Chloro-3-methylphenol	**1360**		µg/kg wet	330	1670		82	30-130		
4-Chloroaniline	**845**		µg/kg wet	167	1670		51	40-140		
2-Chloronaphthalene	**1180**		µg/kg wet	330	1670		71	40-140		
2-Chlorophenol	**987**		µg/kg wet	167	1670		59	30-130		
4-Chlorophenyl phenyl ether	**1280**		µg/kg wet	330	1670		77	40-140		
Chrysene	**1240**		µg/kg wet	66.7	1670		75	40-140		
Dibenzo (a,h) anthracene	**1450**		µg/kg wet	66.7	1670		87	40-140		
Dibenzofuran	**1180**		µg/kg wet	167	1670		71	40-140		
1,2-Dichlorobenzene	**1320**		µg/kg wet	330	1670		79	40-140		
1,3-Dichlorobenzene	**1190**		µg/kg wet	330	1670		72	40-140		
1,4-Dichlorobenzene	**1170**		µg/kg wet	330	1670		70	40-140		
3,3´-Dichlorobenzidine	**1260**		µg/kg wet	330	1670		76	40-140		
2,4-Dichlorophenol	**1260**		µg/kg wet	167	1670		76	30-130		
Diethyl phthalate	**1070**		µg/kg wet	330	1670		64	40-140		
Dimethyl phthalate	**1250**		µg/kg wet	330	1670		75	40-140		
2,4-Dimethylphenol	**1080**		µg/kg wet	330	1670		65	30-130		
Di-n-butyl phthalate	**1140**		µg/kg wet	330	1670		69	40-140		
4,6-Dinitro-2-methylphenol	**907**		µg/kg wet	330	1670		54	30-130		
2,4-Dinitrophenol	**584**		µg/kg wet	330	1670		35	30-130		
2,4-Dinitrotoluene	**1200**		µg/kg wet	167	1670		72	40-140		
2,6-Dinitrotoluene	**1340**		µg/kg wet	167	1670		80	40-140		
Di-n-octyl phthalate	**1250**		µg/kg wet	330	1670		75	40-140		
Fluoranthene	**816**		µg/kg wet	66.7	1670		49	40-140		
Fluorene	**1100**		µg/kg wet	66.7	1670		66	40-140		
Hexachlorobenzene	**1520**		µg/kg wet	167	1670		91	40-140		
Hexachlorobutadiene	**1300**		µg/kg wet	167	1670		78	40-140		
Hexachlorocyclopentadiene	**1310**		µg/kg wet	167	1670		78	40-140		
Hexachloroethane	**1170**		µg/kg wet	167	1670		70	40-140		
Indeno (1,2,3-cd) pyrene	**1690**		µg/kg wet	66.7	1670		101	40-140		
Isophorone	**1050**		µg/kg wet	167	1670		63	40-140		
2-Methylnaphthalene	**986**		µg/kg wet	66.7	1670		59	40-140		
2-Methylphenol	**1120**		µg/kg wet	330	1670		67	30-130		
3 & 4-Methylphenol	**1060**		µg/kg wet	330	1670		64	30-130		
Naphthalene	**1170**		µg/kg wet	66.7	1670		70	40-140		
2-Nitroaniline	**932**		µg/kg wet	330	1670		56	40-140		
3-Nitroaniline	**794**		µg/kg wet	330	1670		48	40-140		
4-Nitroaniline	**1180**		µg/kg wet	167	1670		71	40-140		
Nitrobenzene	**1340**		µg/kg wet	167	1670		80	40-140		
2-Nitrophenol	**1110**		µg/kg wet	167	1670		67	30-130		
4-Nitrophenol	**1180**		µg/kg wet	1320	1670		71	30-130		
N-Nitrosodimethylamine	**988**		µg/kg wet	167	1670		59	40-140		
N-Nitrosodi-n-propylamine	**870**		µg/kg wet	167	1670		52	40-140		
N-Nitrosodiphenylamine	**1500**		µg/kg wet	330	1670		90	40-140		
Pentachlorophenol	**933**		µg/kg wet	330	1670		56	30-130		
Phenanthrene	**1190**		µg/kg wet	66.7	1670		71	40-140		
Phenol	**1290**		µg/kg wet	330	1670		77	30-130		
Pyrene	**811**		µg/kg wet	66.7	1670		49	40-140		
Pyridine	**546**	QC6	µg/kg wet	330	1670		33	40-140		
1,2,4-Trichlorobenzene	**1380**		µg/kg wet	330	1670		83	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

SW846 8270D

Batch 2001800 - SW846 3546

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (2001800-BS1)					Prepared & Analyzed: 22-Sep-20					
1-Methylnaphthalene	**959**		µg/kg wet	66.7	1670		58	40-140		
2,4,5-Trichlorophenol	**1130**		µg/kg wet	330	1670		68	30-130		
2,4,6-Trichlorophenol	**872**		µg/kg wet	167	1670		52	30-130		
Pentachloronitrobenzene	**1470**		µg/kg wet	330	1670		88	40-140		
1,2,4,5-Tetrachlorobenzene	**1080**		µg/kg wet	330	1670		65	40-140		
Surrogate: 2-Fluorobiphenyl	*827*		µg/kg wet		*1670*		*50*	*30-130*		
Surrogate: 2-Fluorophenol	*1010*		µg/kg wet		*1670*		*60*	*30-130*		
Surrogate: Nitrobenzene-d5	*1180*		µg/kg wet		*1670*		*71*	*30-130*		
Surrogate: Phenol-d5	*1130*		µg/kg wet		*1670*		*68*	*30-130*		
Surrogate: Terphenyl-dl4	*1280*		µg/kg wet		*1670*		*77*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1180*		µg/kg wet		*1670*		*71*	*30-130*		
LCS Dup (2001800-BSD1)					Prepared & Analyzed: 22-Sep-20					
Acenaphthene	**1080**		µg/kg wet	66.7	1670		65	40-140	13	30
Acenaphthylene	**1170**		µg/kg wet	66.7	1670		70	40-140	4	30
Aniline	**686**		µg/kg wet	330	1670		41	40-140	5	30
Anthracene	**1320**		µg/kg wet	66.7	1670		79	40-140	8	30
Azobenzene/Diphenyldiazene	**1500**		µg/kg wet	330	1670		90	40-140	4	30
Benzidine	**221**	QC6	µg/kg wet	660	1670		13	40-140	4	30
Benzo (a) anthracene	**1490**		µg/kg wet	66.7	1670		89	40-140	10	30
Benzo (a) pyrene	**1590**		µg/kg wet	66.7	1670		96	40-140	10	30
Benzo (b) fluoranthene	**1740**		µg/kg wet	66.7	1670		104	40-140	11	30
Benzo (g,h,i) perylene	**1620**		µg/kg wet	66.7	1670		97	40-140	8	30
Benzo (k) fluoranthene	**1330**		µg/kg wet	66.7	1670		80	40-140	8	30
Benzoic acid	**322**	QC6	µg/kg wet	330	1670		19	30-130	21	30
Benzyl alcohol	**1170**		µg/kg wet	330	1670		70	40-140	9	30
Bis(2-chloroethoxy)methane	**1170**		µg/kg wet	330	1670		70	40-140	4	30
Bis(2-chloroethyl)ether	**1030**		µg/kg wet	167	1670		62	40-140	3	30
Bis(2-chloroisopropyl)ether	**858**		µg/kg wet	167	1670		51	40-140	2	30
Bis(2-ethylhexyl)phthalate	**1370**		µg/kg wet	167	1670		82	40-140	8	30
4-Bromophenyl phenyl ether	**354**	QC6	µg/kg wet	330	1670		21	40-140	7	30
Butyl benzyl phthalate	**1430**		µg/kg wet	330	1670		86	40-140	7	30
Carbazole	**1400**		µg/kg wet	167	1670		84	40-140	8	30
4-Chloro-3-methylphenol	**1410**		µg/kg wet	330	1670		84	30-130	3	30
4-Chloroaniline	**877**		µg/kg wet	167	1670		53	40-140	4	30
2-Chloronaphthalene	**1200**		µg/kg wet	330	1670		72	40-140	2	30
2-Chlorophenol	**1060**		µg/kg wet	167	1670		63	30-130	7	30
4-Chlorophenyl phenyl ether	**1300**		µg/kg wet	330	1670		78	40-140	1	30
Chrysene	**1310**		µg/kg wet	66.7	1670		79	40-140	5	30
Dibenzo (a,h) anthracene	**1540**		µg/kg wet	66.7	1670		93	40-140	6	30
Dibenzofuran	**1270**		µg/kg wet	167	1670		76	40-140	7	30
1,2-Dichlorobenzene	**1270**		µg/kg wet	330	1670		76	40-140	4	30
1,3-Dichlorobenzene	**1130**		µg/kg wet	330	1670		68	40-140	5	30
1,4-Dichlorobenzene	**1250**		µg/kg wet	330	1670		75	40-140	7	30
3,3´-Dichlorobenzidine	**1380**		µg/kg wet	330	1670		83	40-140	8	30
2,4-Dichlorophenol	**1310**		µg/kg wet	167	1670		78	30-130	3	30
Diethyl phthalate	**1150**		µg/kg wet	330	1670		69	40-140	7	30
Dimethyl phthalate	**1330**		µg/kg wet	330	1670		80	40-140	7	30
2,4-Dimethylphenol	**1080**		µg/kg wet	330	1670		65	30-130	0.09	30
Di-n-butyl phthalate	**1260**		µg/kg wet	330	1670		75	40-140	9	30
4,6-Dinitro-2-methylphenol	**992**		µg/kg wet	330	1670		60	30-130	9	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
LCS Dup (2001800-BSD1)					Prepared & Analyzed: 22-Sep-20					
2,4-Dinitrophenol	**709**		µg/kg wet	330	1670		43	30-130	19	30
2,4-Dinitrotoluene	**1260**		µg/kg wet	167	1670		76	40-140	5	30
2,6-Dinitrotoluene	**1350**		µg/kg wet	167	1670		81	40-140	1	30
Di-n-octyl phthalate	**1400**		µg/kg wet	330	1670		84	40-140	12	30
Fluoranthene	**880**		µg/kg wet	66.7	1670		53	40-140	8	30
Fluorene	**1150**		µg/kg wet	66.7	1670		69	40-140	5	30
Hexachlorobenzene	**1620**		µg/kg wet	167	1670		97	40-140	7	30
Hexachlorobutadiene	**1230**		µg/kg wet	167	1670		74	40-140	5	30
Hexachlorocyclopentadiene	**1310**		µg/kg wet	167	1670		79	40-140	0.2	30
Hexachloroethane	**1180**		µg/kg wet	167	1670		71	40-140	0.7	30
Indeno (1,2,3-cd) pyrene	**1840**		µg/kg wet	66.7	1670		110	40-140	9	30
Isophorone	**1020**		µg/kg wet	167	1670		61	40-140	3	30
2-Methylnaphthalene	**1000**		µg/kg wet	66.7	1670		60	40-140	1	30
2-Methylphenol	**1110**		µg/kg wet	330	1670		67	30-130	0.7	30
3 & 4-Methylphenol	**1160**		µg/kg wet	330	1670		69	30-130	9	30
Naphthalene	**1140**		µg/kg wet	66.7	1670		68	40-140	3	30
2-Nitroaniline	**1050**		µg/kg wet	330	1670		63	40-140	12	30
3-Nitroaniline	**886**		µg/kg wet	330	1670		53	40-140	11	30
4-Nitroaniline	**1270**		µg/kg wet	167	1670		76	40-140	8	30
Nitrobenzene	**1290**		µg/kg wet	167	1670		77	40-140	4	30
2-Nitrophenol	**1060**		µg/kg wet	167	1670		64	30-130	5	30
4-Nitrophenol	**1290**		µg/kg wet	1320	1670		77	30-130	9	30
N-Nitrosodimethylamine	**905**		µg/kg wet	167	1670		54	40-140	9	30
N-Nitrosodi-n-propylamine	**874**		µg/kg wet	167	1670		52	40-140	0.4	30
N-Nitrosodiphenylamine	**1590**		µg/kg wet	330	1670		95	40-140	6	30
Pentachlorophenol	**1060**		µg/kg wet	330	1670		64	30-130	13	30
Phenanthrene	**1300**		µg/kg wet	66.7	1670		78	40-140	9	30
Phenol	**1070**		µg/kg wet	330	1670		64	30-130	18	30
Pyrene	**873**		µg/kg wet	66.7	1670		52	40-140	7	30
Pyridine	**710**		µg/kg wet	330	1670		43	40-140	26	30
1,2,4-Trichlorobenzene	**1350**		µg/kg wet	330	1670		81	40-140	3	30
1-Methylnaphthalene	**1020**		µg/kg wet	66.7	1670		61	40-140	6	30
2,4,5-Trichlorophenol	**1180**		µg/kg wet	330	1670		71	30-130	5	30
2,4,6-Trichlorophenol	**925**		µg/kg wet	167	1670		55	30-130	6	30
Pentachloronitrobenzene	**1540**		µg/kg wet	330	1670		92	40-140	5	30
1,2,4,5-Tetrachlorobenzene	**1150**		µg/kg wet	330	1670		69	40-140	6	30
Surrogate: 2-Fluorobiphenyl	*816*		µg/kg wet		*1670*		*49*	*30-130*		
Surrogate: 2-Fluorophenol	*1060*		µg/kg wet		*1670*		*63*	*30-130*		
Surrogate: Nitrobenzene-d5	*1180*		µg/kg wet		*1670*		*71*	*30-130*		
Surrogate: Phenol-d5	*1120*		µg/kg wet		*1670*		*67*	*30-130*		
Surrogate: Terphenyl-dl4	*1380*		µg/kg wet		*1670*		*83*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1250*		µg/kg wet		*1670*		*75*	*30-130*		
Duplicate (2001800-DUP1)		R01	**Source: SC59391-01**		Prepared & Analyzed: 22-Sep-20					
Acenaphthene	< 377		µg/kg dry	377		BRL				30
Acenaphthylene	**494**		µg/kg dry	377		527			6	30
Aniline	< 1870		µg/kg dry	1870		BRL				30
Anthracene	**270**	J	µg/kg dry	377		361			29	30
Azobenzene/Diphenyldiazene	< 1870		µg/kg dry	1870		BRL				30
Benzidine	< 3730		µg/kg dry	3730		BRL				30
Benzo (a) anthracene	**867**		µg/kg dry	377		1050			19	30

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Duplicate (2001800-DUP1)		R01	**Source: SC59391-01**			Prepared & Analyzed: 22-Sep-20				
Benzo (a) pyrene	**1000**		µg/kg dry	377		1290			25	30
Benzo (b) fluoranthene	**892**		µg/kg dry	377		980			9	30
Benzo (g,h,i) perylene	**852**		µg/kg dry	377		1090			24	30
Benzo (k) fluoranthene	**545**	QR9	µg/kg dry	377		909			50	30
Benzoic acid	**516**	J	µg/kg dry	1870		578			11	30
Benzyl alcohol	< 1870		µg/kg dry	1870		BRL				30
Bis(2-chloroethoxy)methane	< 1870		µg/kg dry	1870		BRL				30
Bis(2-chloroethyl)ether	< 944		µg/kg dry	944		BRL				30
Bis(2-chloroisopropyl)ether	< 944		µg/kg dry	944		BRL				30
Bis(2-ethylhexyl)phthalate	< 944		µg/kg dry	944		BRL				30
4-Bromophenyl phenyl ether	< 1870		µg/kg dry	1870		BRL				30
Butyl benzyl phthalate	< 1870		µg/kg dry	1870		BRL				30
Carbazole	< 944		µg/kg dry	944		BRL				30
4-Chloro-3-methylphenol	< 1870		µg/kg dry	1870		BRL				30
4-Chloroaniline	< 944		µg/kg dry	944		BRL				30
2-Chloronaphthalene	< 1870		µg/kg dry	1870		BRL				30
2-Chlorophenol	< 944		µg/kg dry	944		BRL				30
4-Chlorophenyl phenyl ether	< 1870		µg/kg dry	1870		BRL				30
Chrysene	**829**		µg/kg dry	377		1010			20	30
Dibenzo (a,h) anthracene	**281**	J	µg/kg dry	377		367			27	30
Dibenzofuran	< 944		µg/kg dry	944		BRL				30
1,2-Dichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
1,3-Dichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
1,4-Dichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
3,3´-Dichlorobenzidine	< 1870		µg/kg dry	1870		BRL				30
2,4-Dichlorophenol	< 944		µg/kg dry	944		BRL				30
Diethyl phthalate	< 1870		µg/kg dry	1870		BRL				30
Dimethyl phthalate	< 1870		µg/kg dry	1870		BRL				30
2,4-Dimethylphenol	< 1870		µg/kg dry	1870		BRL				30
Di-n-butyl phthalate	< 1870		µg/kg dry	1870		BRL				30
4,6-Dinitro-2-methylphenol	< 1870		µg/kg dry	1870		BRL				30
2,4-Dinitrophenol	< 1870		µg/kg dry	1870		320				30
2,4-Dinitrotoluene	< 944		µg/kg dry	944		BRL				30
2,6-Dinitrotoluene	< 944		µg/kg dry	944		BRL				30
Di-n-octyl phthalate	< 1870		µg/kg dry	1870		BRL				30
Fluoranthene	**899**		µg/kg dry	377		848			6	30
Fluorene	< 377		µg/kg dry	377		BRL				30
Hexachlorobenzene	< 944		µg/kg dry	944		BRL				30
Hexachlorobutadiene	< 944		µg/kg dry	944		BRL				30
Hexachlorocyclopentadiene	< 944		µg/kg dry	944		BRL				30
Hexachloroethane	< 944		µg/kg dry	944		BRL				30
Indeno (1,2,3-cd) pyrene	**714**		µg/kg dry	377		905			24	30
Isophorone	< 944		µg/kg dry	944		BRL				30
2-Methylnaphthalene	< 377		µg/kg dry	377		BRL				30
2-Methylphenol	< 1870		µg/kg dry	1870		BRL				30
3 & 4-Methylphenol	< 1870		µg/kg dry	1870		BRL				30
Naphthalene	< 377		µg/kg dry	377		BRL				30
2-Nitroaniline	< 1870		µg/kg dry	1870		BRL				30
3-Nitroaniline	< 1870		µg/kg dry	1870		BRL				30
4-Nitroaniline	< 944		µg/kg dry	944		BRL				30

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 2001800 - SW846 3546										
Duplicate (2001800-DUP1)		R01	**Source: SC59391-01**			Prepared & Analyzed: 22-Sep-20				
Nitrobenzene	< 944		µg/kg dry	944		BRL				30
2-Nitrophenol	< 944		µg/kg dry	944		BRL				30
4-Nitrophenol	< 7460		µg/kg dry	7460		BRL				30
N-Nitrosodimethylamine	< 944		µg/kg dry	944		BRL				30
N-Nitrosodi-n-propylamine	< 944		µg/kg dry	944		BRL				30
N-Nitrosodiphenylamine	< 1870		µg/kg dry	1870		BRL				30
Pentachlorophenol	< 1870		µg/kg dry	1870		BRL				30
Phenanthrene	**303**	J,QR4	µg/kg dry	377		455			40	30
Phenol	< 1870		µg/kg dry	1870		BRL				30
Pyrene	**1010**		µg/kg dry	377		835			19	30
Pyridine	< 1870		µg/kg dry	1870		BRL				30
1,2,4-Trichlorobenzene	< 1870		µg/kg dry	1870		BRL				30
1-Methylnaphthalene	< 377		µg/kg dry	377		BRL				30
2,4,5-Trichlorophenol	< 1870		µg/kg dry	1870		BRL				30
2,4,6-Trichlorophenol	< 944		µg/kg dry	944		BRL				30
Pentachloronitrobenzene	< 1870		µg/kg dry	1870		BRL				30
1,2,4,5-Tetrachlorobenzene	< 1870		µg/kg dry	1870		BRL				30
Surrogate: 2-Fluorobiphenyl	*1490*		µg/kg dry		*1880*		*79*	*30-130*		
Surrogate: 2-Fluorophenol	*1550*		µg/kg dry		*1880*		*82*	*30-130*		
Surrogate: Nitrobenzene-d5	*1560*		µg/kg dry		*1880*		*83*	*30-130*		
Surrogate: Phenol-d5	*1600*		µg/kg dry		*1880*		*85*	*30-130*		
Surrogate: Terphenyl-dl4	*1380*		µg/kg dry		*1880*		*73*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1180*		µg/kg dry		*1880*		*63*	*30-130*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8100Mod.										
Batch 2001798 - SW846 3546										
Blank (2001798-BLK1)					Prepared & Analyzed: 22-Sep-20					
Total Petroleum Hydrocarbons	< 13.3		mg/kg wet	13.3						
Surrogate: o-Terphenyl	*4.67*		mg/kg wet		*6.67*		*70*	*40-140*		
Surrogate: 1-Chlorooctadecane	*5.53*		mg/kg wet		*6.67*		*83*	*40-140*		
LCS (2001798-BS1)					Prepared & Analyzed: 22-Sep-20					
Total Petroleum Hydrocarbons	**265**		mg/kg wet	13.3	333		79	40-140		
Surrogate: o-Terphenyl	*5.65*		mg/kg wet		*6.67*		*85*	*40-140*		
Surrogate: 1-Chlorooctadecane	*6.13*		mg/kg wet		*6.67*		*92*	*40-140*		
LCS Dup (2001798-BSD1)					Prepared & Analyzed: 22-Sep-20					
Total Petroleum Hydrocarbons	**254**		mg/kg wet	13.3	333		76	40-140	4	30
Surrogate: o-Terphenyl	*5.44*		mg/kg wet		*6.67*		*82*	*40-140*		
Surrogate: 1-Chlorooctadecane	*5.92*		mg/kg wet		*6.67*		*89*	*40-140*		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

SW846 6010C

Batch 2001784 - SW846 3050B

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (2001784-BLK1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	< 1.56		mg/kg wet	1.56						
Cadmium	< 0.521		mg/kg wet	0.521						
Chromium	< 1.04		mg/kg wet	1.04						
Lead	< 1.56		mg/kg wet	1.56						
Selenium	< 1.56		mg/kg wet	1.56						
Silver	< 3.12		mg/kg wet	3.12						
Sulfur	< 26.0		mg/kg wet	26.0						
Barium	< 1.04		mg/kg wet	1.04						
LCS (2001784-BS1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Sulfur	**113**		mg/kg wet	26.2	131		87	85-115		
LCS Dup (2001784-BSD1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Sulfur	**110**		mg/kg wet	25.2	126		87	85-115	3	30
Duplicate (2001784-DUP1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**22.7**		mg/kg dry	1.71		23.3			2	20
Cadmium	< 0.570		mg/kg dry	0.570		BRL				20
Chromium	**18.8**		mg/kg dry	1.14		17.7			6	20
Lead	**20.6**		mg/kg dry	1.71		20.1			2	20
Selenium	< 1.71		mg/kg dry	1.71		BRL				20
Silver	< 3.42		mg/kg dry	3.42		BRL				20
Sulfur	**207**		mg/kg dry	28.5		184			12	20
Barium	**56.9**		mg/kg dry	1.14		55.5			2	20
Matrix Spike (2001784-MS1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**145**		mg/kg dry	1.71	142	23.3	85	75-125		
Cadmium	**119**		mg/kg dry	0.569	142	BRL	83	75-125		
Chromium	**157**		mg/kg dry	1.14	142	17.7	98	75-125		
Lead	**136**		mg/kg dry	1.71	142	20.1	81	75-125		
Selenium	**117**		mg/kg dry	1.71	142	BRL	82	75-125		
Silver	**96.8**	QM7	mg/kg dry	3.42	142	BRL	68	75-125		
Sulfur	**294**		mg/kg dry	28.5	142	184	77	70-130		
Barium	**210**		mg/kg dry	1.14	142	55.5	108	75-125		
Matrix Spike Dup (2001784-MSD1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**145**		mg/kg dry	1.71	143	23.3	85	75-125	0.4	20
Cadmium	**118**		mg/kg dry	0.571	143	BRL	82	75-125	0.8	20
Chromium	**154**		mg/kg dry	1.14	143	17.7	95	75-125	2	20
Lead	**147**		mg/kg dry	1.71	143	20.1	89	75-125	8	20
Selenium	**120**		mg/kg dry	1.71	143	BRL	84	75-125	2	20
Silver	**93.9**	QM7	mg/kg dry	3.43	143	BRL	66	75-125	3	20
Sulfur	**289**		mg/kg dry	28.5	143	184	74	70-130	1	20
Barium	**197**		mg/kg dry	1.14	143	55.5	99	75-125	6	20
Post Spike (2001784-PS1)			**Source: SC59391-01**		Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**165**		mg/kg dry	1.84	153	23.3	92	80-120		
Cadmium	**139**		mg/kg dry	0.612	153	BRL	91	80-120		
Chromium	**174**		mg/kg dry	1.22	153	17.7	102	80-120		
Lead	**155**		mg/kg dry	1.84	153	20.1	88	80-120		
Selenium	**136**		mg/kg dry	1.84	153	BRL	89	80-120		
Sulfur	**310**		mg/kg dry	30.6	153	184	82	80-120		
Barium	**205**		mg/kg dry	1.22	153	55.5	98	80-120		
Reference (2001784-SRM1)					Prepared: 22-Sep-20 Analyzed: 23-Sep-20					
Arsenic	**85.4**		mg/kg wet	1.50	105		82	70.1-107.7		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

SW846 6010C

Batch 2001784 - SW846 3050B

Reference (2001784-SRM1) Prepared: 22-Sep-20 Analyzed: 23-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Cadmium	**120**		mg/kg wet	0.500	150		80	70.2-106.7		
Chromium	**136**		mg/kg wet	1.00	156		87	72.3-111.6		
Lead	**80.8**		mg/kg wet	1.50	93.0		87	73-116.9		
Selenium	**35.4**		mg/kg wet	1.50	45.4		78	74.1-112.2		
Silver	**33.8**		mg/kg wet	3.00	41.3		82	69.3-117.3		
Barium	**293**		mg/kg wet	1.00	322		91	77.2-110.3		

Reference (2001784-SRM2) Prepared: 22-Sep-20 Analyzed: 23-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Arsenic	**78.1**		mg/kg wet	1.50	101		78	70.1-107.7		
Cadmium	**112**		mg/kg wet	0.500	144		77	70.2-106.7		
Chromium	**129**		mg/kg wet	1.00	150		86	72.3-111.6		
Lead	**76.8**		mg/kg wet	1.50	89.5		86	73-116.9		
Selenium	**32.6**		mg/kg wet	1.50	43.7		75	74.1-112.2		
Silver	**32.3**		mg/kg wet	3.00	39.7		81	69.3-117.3		
Barium	**268**		mg/kg wet	1.00	310		86	77.2-110.3		

SW846 7471B

Batch 2001785 - EPA200/SW7000 Series

Blank (2001785-BLK1) Prepared: 22-Sep-20 Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mercury	< 0.0297		mg/kg wet	0.0297						

Reference (2001785-SRM1) Prepared: 22-Sep-20 Analyzed: 29-Sep-20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mercury	**6.22**	D	mg/kg wet	0.600	8.81		71	42.1-100		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 9012_ReactiveCN										
Batch 551420 - 7.3.3										
Duplicate (1754602X)			**Source: SC59391-02**			Prepared: 27-Sep-20	Analyzed: 28-Sep-20			
Cyanide, Reactive	< 10		mg/kg	10		BRL		-	NC	20
Blank (5514201AB)						Prepared: 27-Sep-20	Analyzed: 28-Sep-20			
Cyanide, Reactive	< 10		mg/kg	10				-		
LCS (5514202AQ)						Prepared: 27-Sep-20	Analyzed: 28-Sep-20			
Cyanide, Reactive	**304**		mg/kg	200	1000		30	10-100		
SW846 9034_Reactive										
Batch 551421 - 7.3.4										
Duplicate (1754602X)			**Source: SC59391-02**			Prepared: 27-Sep-20	Analyzed: 28-Sep-20			
Sulfide, Reactive	< 10		mg/kg	10		BRL		-	NC	20
Blank (5514211AB)						Prepared: 27-Sep-20	Analyzed: 28-Sep-20			
Sulfide, Reactive	< 10		mg/kg	10				-		
LCS (5514212AQ)						Prepared: 27-Sep-20	Analyzed: 28-Sep-20			
Sulfide, Reactive	**741**		mg/kg	10	960		77	10-100		

Notes and Definitions

BsH	Data for this analyte may be biased high based on QC spike recoveries.
D	Data reported from a dilution
IS1	Internal standard out due to matrix interference
QC6	Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR4	Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
R01	The Reporting Limit has been raised to account for matrix interference.
S02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
SGCMSVOC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogates with three required by program methods.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

Gasoline - includes regular, unleaded, premium, etc.
Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
Fuel Oil #4 - includes #4 fuel oil
Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
Motor Oil - includes virgin and waste automobile oil
Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
Aviation Fuel - includes kerosene, Jet A and JP-4
Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as Calculated as.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC59391 EM

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Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☒ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: ____________

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Drive
Chelmsford MA
Telephone #: 978-853-1561
Project Mgr: Ryan McCarthy

Invoice To: SAME
P.O No.: ____________ Quote #: ____________

Project No: ____________
Site Name: ROCHESTER NH MGP
Location: ROCHESTER State: NH
Sampler(s): S. HOWE

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= ice 12= ____________

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= ____________ X2= ____________ X3= ____________

G= Grab C=Compsite

List Preservative Code below: 7 | 9 | 11

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Clear ~~Amber~~ Glass	# of Clear Glass	# of Plastic	8260	8260	8260, 8270, REACTIVITY/	CYANIDE/	SULFIDE, SULFUR,	RCRA, TPH			Check if chlorinated
SC59391-01	TrenchA_0-6	9/18/20	0850	C	SO	3	2			1	2	2						☐
-02	TrenchB_0-6		0910															☐
-03	TrenchD_0-6		1009															☐
-04	TrenchC_0-6		0942															☐
-05	HDDB_5-10		1110															☐
-06	HDDA_5-10		1040															☐
-07	HDDC_5-10		1138															☐
																		☐
																		☐
																		☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☒ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____________
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
		9/21/20	11:15	Observed 1.3
		9/21/20	16:40	Corection Factor +1
				Corrected 2.3
				IR ID # 6

☒ EDD format: Equis
☒ E-mail to: COLIN.CALLAHAN @AECom.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☑ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

SC59391 EM

eurofins

Environment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: ______

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Colin Callahan
AECOM
250 Apollo Drive
Chelmsford MA
Telephone #: 978-853-1561
Project Mgr: Ryan McCarthy

Invoice To: ← SAME
P.O No.: ______ Quote #: ______

Project No: ______
Site Name: ROCHESTER NH MGP
Location: ROCHESTER State: NH
Sampler(s): S. HOWE

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= ice 12= ______

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= ______ X2= ______ X3= ______

G= Grab C=Compsite

						Containers					List Preservative Code below:								
											7	9	11						
											Analysis			*					
Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	Clear # of ~~Amber~~ Glass	# of Clear Glass	# of Plastic		8260	8260	8260, 8270, REACTIVITY/CYANIDE/SULFIDE, SULFUR, RCRA, TPH						Check if chlorinated
SC59391-01	TrenchA_0-6	9/18/20	0850	C	SO	3	2				1	2	2						☐
-02	TrenchB_0-6	↓	0910	〃	〃	〃	〃				〃	〃	〃						☐
-03	TrenchD_0-6		1009	〃	〃	〃	〃				〃	〃	〃						☐
-04	TrenchC_0-6		0942	〃	〃	〃	〃				〃	〃	〃						☐
-05	HDDB_5-10		1110	〃	〃	〃	〃				〃	〃	〃						☐
-06	HDDA_5-10		1040	〃	〃	〃	〃				〃	〃	〃						☐
-07	HDDC_5-10	↓	1138	〃	〃	〃	〃				〃	〃	〃						☐
08	Trip Blank										X	X							☐
																			☐
																			☐

* 8100 per Colin. 9/24

TB added per Colin 9/24

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☒ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ______
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
		9/21/20	11:15	Observed 1.3
		9/21/20	16:40	Corection Factor +1
				Corrected 2.3
				IR ID # 6

☒ EDD format: EQuIS
☒ E-mail to: COLIN.CALLAHAN@AECOM.COM

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample Shipping Address: 126 Myron Street • West Springfield, MA 01089 • 413-789-9018
Lab Address: 646 Camp Ave • North Kingstown, RI 02852
www.EurofinsUS.com/Spectrum

Rev. Jan 2020

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	*Client ID*	*Analysis*	*Added*
SC59391-01	TrenchA_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-02	TrenchB_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-03	TrenchD_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-04	TrenchC_0-6	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-05	HDDB_5-10	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-06	HDDA_5-10	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-07	HDDC_5-10	Volatile Organic Compounds by SW846 8260	9/28/2020
SC59391-08	Trip Blank	Volatile Organic Compounds by SW846 8260	9/28/2020

Batch Summary

2001784

Total Metals by EPA 6000/7000 Series Methods

2001784-BLK1
2001784-BS1
2001784-BSD1
2001784-DUP1
2001784-MS1
2001784-MSD1
2001784-PS1
2001784-SRM1
2001784-SRM2
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001785

Total Metals by EPA 6000/7000 Series Methods

2001785-BLK1
2001785-SRM1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001790

General Chemistry Parameters

SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001798

Extractable Petroleum Hydrocarbons

2001798-BLK1
2001798-BS1
2001798-BSD1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001800

Semivolatile Organic Compounds by GCMS

2001800-BLK1
2001800-BS1
2001800-BSD1
2001800-DUP1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

2001812

Volatile Organic Compounds

2001812-BLK1
2001812-BS1
2001812-BSD1
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)
SC59391-08 (Trip Blank)

2001826

Volatile Organic Compounds

2001826-BLK1
2001826-BS1
2001826-BSD1
2001826-MRL1
SC59391-01 (TrenchA_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)
SC59391-08 (Trip Blank)

2001880

Volatile Organic Compounds

2001880-BLK1
2001880-BS1
2001880-BSD1
2001880-MRL1
SC59391-02 (TrenchB_0-6)

551420

Subcontracted Analyses

1754602X
5514201AB
5514202AQ
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

551421

Subcontracted Analyses

1754602X
5514211AB
5514212AQ
SC59391-01 (TrenchA_0-6)
SC59391-02 (TrenchB_0-6)
SC59391-03 (TrenchD_0-6)
SC59391-04 (TrenchC_0-6)
SC59391-05 (HDDB_5-10)
SC59391-06 (HDDA_5-10)
SC59391-07 (HDDC_5-10)

Appendix E Waste Disposal Documentation - Soil Regulator Station Piping

Approval 213291109 ESMI NH

Ticket	Date		Truck	Plate	Manifest	Gross	Tare	Net	Units
2466013	4/7/2021	9:20 AM	GRAFBROS 294	GRAFBROS 294	04072021ROCHESTER1	37.61	20.62	16.99	T
2478712	4/7/2021	11:36 AM	GRAFBROS 294	GRAFBROS 294	04072021ROCHESTER2	38.78	21.08	17.70	T
2466014	4/8/2021	7:01 AM	GRAFBROS 294	GRAFBROS 294	04082021ROCHESTER1	40.86	20.40	20.46	T
2479705	4/8/2021	9:18 AM	GRAFBROS 294	GRAFBROS 294	04082021ROCHESTER2	41.02	21.11	19.91	T
2480160	4/8/2021	11:59 AM	GRAFBROS 294	GRAFBROS 294	04082021ROCHESTER3	41.59	20.27	21.32	T
2466015	4/9/2021	7:02 AM	GRAFBROS 294	GRAFBROS 294	04092021ROCHESTER1	37.91	20.69	17.22	T
2481067	4/9/2021	9:22 AM	GRAFBROS 294	GRAFBROS 294	04092021ROCHESTER2	41.22	20.52	20.70	T
2481521	4/9/2021	12:05 PM	GRAFBROS 294	GRAFBROS 294	04092021ROCHESTER3	40.18	20.55	19.63	T
2466016	4/12/2021	7:07 AM	GRAFBROS 294	GRAFBROS 294	04122021ROCHESTER1	39.45	20.22	19.23	T

2482348	4/12/2021	9:34 AM	GRAFBROS 294	GRAFBROS 294	04122021ROCHESTER2	40.64	20.39	20.25	T
2482680	4/12/2021	11:56 AM	GRAFBROS 294	GRAFBROS 294	04122021ROCHESTER3	42.48	21.05	21.43	T
2466017	4/13/2021	7:01 AM	GRAFBROS 294	GRAFBROS 294	041321ROCHESTER1	35.51	21.13	14.38	T
2483496	4/13/2021	9:23 AM	GRAFBROS 294	GRAFBROS 294	041321ROCHESTER2	43.33	20.46	22.87	T
2483826	4/13/2021	11:48 AM	GRAFBROS 294	GRAFBROS 294	041321ROCHESTER3	38.21	21.00	17.21	T
2466018	4/14/2021	7:02 AM	GRAFBROS 294	GRAFBROS 294	41421ROCHESTER1	42.42	20.39	22.03	T
2484658	4/14/2021	9:22 AM	GRAFBROS 294	GRAFBROS 294	41421ROCHESTER2	40.21	20.80	19.41	T
2484991	4/14/2021	11:40 AM	GRAFBROS 294	GRAFBROS 294	41421ROCHESTER3	42.07	20.28	21.79	T
2466019	4/15/2021	7:18 AM	GRAFBROS 294	GRAFBROS 294	41521ROCHESTER1	42.71	21.13	21.58	T
2485928	4/15/2021	9:50 AM	GRAFBROS 294	GRAFBROS 294	41521ROCHESTER2	37.96	21.08	16.88	T
2486309	4/15/2021	12:23 PM	GRAFBROS 294	GRAFBROS 294	41521ROCHESTER3	43.64	21.21	22.43	T
2466020	4/16/2021	6:58 AM	GRAFBROS 294	GRAFBROS 294	041621ROCHESTER1	37.72	20.53	17.19	T
2487106	4/16/2021	9:39 AM	GRAFBROS 294	GRAFBROS 294	41621ROCHESTER2	32.13	20.91	11.22	T

2487468	4/16/2021	12:16 PM	GRAFBROS 280	GRAFBROS 280	41621ROCHESTER3	34.20	21.00	13.20	T
2466021	4/19/2021	8:14 AM	GRAFBROS 280	GRAFBROS 280	041921ROCHESTER1	40.13	17.03	23.10	T
2488717	4/19/2021	11:46 AM	GRAFBROS 280	GRAFBROS 280	41921ROCHESTER2	41.17	17.58	23.59	T
2489036	4/19/2021	2:32 PM	GRAFBROS 280	GRAFBROS 280	41921ROCHESTER3	37.17	17.00	20.17	T
2466022	4/20/2021	7:17 AM	GRAFBROS 280	GRAFBROS 280	42021ROCHESTER1	38.73	17.87	20.86	T
2489616	4/20/2021	10:12 AM	GRAFBROS 280	GRAFBROS 280	42021ROCHESTER2	36.64	17.53	19.11	T
2490081	4/20/2021	1:54 PM	GRAFBROS 280	GRAFBROS 280	42021ROCHESTER3	38.19	16.88	21.31	T
2489511	4/21/2021	7:35 AM	GRAFBROS 280	GRAFBROS 280	42121ROCHESTER	42.21	17.85	24.36	T
2490966	4/21/2021	10:58 AM	GRAFBROS 280	GRAFBROS 280	42121ROCHESTER2	36.36	17.07	19.29	T
2491431	4/21/2021	2:13 PM	GRAFBROS 280	GRAFBROS 280	42121ROCHESTER3	34.36	17.49	16.87	T
2489512	4/22/2021	7:41 AM	GRAFBROS 280	GRAFBROS 280	42221ROCHESTER1	41.96	17.01	24.95	T
2492143	4/22/2021	10:26 AM	GRAFBROS 280	GRAFBROS 280	42221ROCHESTER2	36.01	17.44	18.57	T
2492486	4/22/2021	1:02 PM	GRAFBROS 295	GRAFBROS 295	42221ROCHESTER3	40.19	18.23	21.96	T
2492523	4/22/2021	1:17 PM	GRAFBROS 280	GRAFBROS 280	42221ROCHESTER4	36.63	17.01	19.62	T

2489514	4/26/2021	8:09 AM	GRAFBROS 289	GRAFBROS 289	42621ROC HESTER	40.51	17.48	23.03	T
2494470	4/26/2021	10:52 AM	GRAFBROS 289	GRAFBROS 289	42621ROC HESTER2	35.45	17.87	17.58	T
2494889	4/26/2021	1:57 PM	GRAFBROS 289	GRAFBROS 289	42621ROC HESTER3	36.06	17.36	18.70	T
2489515	4/27/2021	8:24 AM	GRAFBROS 280	GRAFBROS 280	42721ROC HESTER1	33.39	17.47	15.92	T
2495729	4/27/2021	11:35 AM	GRAFBROS 280	GRAFBROS 280	42721ROC HESTER2	33.19	17.00	16.19	T
2496040	4/27/2021	2:27 PM	GRAFBROS 280	GRAFBROS 280	42721ROC HESTER3	38.58	17.69	20.89	T
2489516	4/28/2021	7:50 AM	GRAFBROS 280	GRAFBROS 280	42821ROC HESTER1	38.00	16.70	21.30	T
2496636	4/28/2021	10:32 AM	GRAFBROS 280	GRAFBROS 280	42821ROC HESTER2	33.16	16.85	16.31	T
2496947	4/28/2021	1:21 PM	GRAFBROS 280	GRAFBROS 280	42821ROC HESTER3	35.29	17.03	18.26	T
2489517	4/29/2021	7:41 AM	GRAFBROS 280	GRAFBROS 280	42921ROC HESTER1	32.54	17.42	15.12	T
2497787	4/29/2021	10:31 AM	GRAFBROS 280	GRAFBROS 280	42921ROC HESTER2	40.66	16.89	23.77	T
2498195	4/29/2021	1:36 PM	GRAFBROS 280	GRAFBROS 280	42921ROC HESTER3	34.86	16.96	17.90	T
2489518	4/30/2021	7:34 AM	GRAFBROS 280	GRAFBROS 280	43021ROC HESTER1	37.73	16.81	20.92	T
2498967	4/30/2021	10:35 AM	GRAFBROS 280	GRAFBROS 280	43021ROC HESTER2	31.77	17.57	14.20	T

2499333	4/30/2021	1:37 PM	GRAFBROS 280	GRAFBROS 280	43021ROCHESTER3	36.00	17.17	18.83	T
2496101	5/3/2021	7:43 AM	GRAFBROS 280	GRAFBROS 280	50321ROCHESTER1	36.44	16.81	19.63	T
2500128	5/3/2021	10:27 AM	GRAFBROS 280	GRAFBROS 280	50321ROCHESTER2	32.04	17.39	14.65	T
2500602	5/3/2021	1:46 PM	GRAFBROS 280	GRAFBROS 280	50321ROCHESTER3	35.11	17.01	18.10	T
2496102	5/4/2021	8:04 AM	GRAFBROS 280	GRAFBROS 280	50421ROCHESTER1	36.68	17.51	19.17	T
2501324	5/4/2021	10:43 AM	GRAFBROS 280	GRAFBROS 280	50421ROCHESTER2	35.69	17.51	18.18	T
2501670	5/4/2021	1:19 PM	GRAFBROS 280	GRAFBROS 280	50421ROCHESTER3	38.02	16.93	21.09	T
2496103	5/5/2021	7:56 AM	GRAFBROS 280	GRAFBROS 280	50521ROCHESTER1	35.94	17.71	18.23	T
2502412	5/5/2021	10:37 AM	GRAFBROS 280	GRAFBROS 280	50521ROCHESTER2	38.76	16.86	21.90	T
2502822	5/5/2021	1:53 PM	GRAFBROS 280	GRAFBROS 280	50521ROCHESTER3	35.36	17.22	18.14	T
2496105	5/6/2021	7:56 AM	GRAFBROS 280	GRAFBROS 280	50621ROCHESTER1	34.13	17.47	16.66	T
2503507	5/6/2021	10:41 AM	GRAFBROS 280	GRAFBROS 280	50621ROCHESTER2	34.83	16.93	17.90	T
2503895	5/6/2021	1:54 PM	GRAFBROS 280	GRAFBROS 280	50621ROCHESTER3	34.25	16.75	17.50	T
2505453	5/13/2021	8:02 AM	GRAFBROS 280	GRAFBROS 280	51321ROCHESTER1	28.77	16.85	11.92	T

2508928	5/13/2021	11:00 AM	GRAFBROS 280	GRAFBROS 280	51321ROCHESTER2	35.51	17.28	18.23	T
2508554	6/1/2021	9:15 AM	GRAFBROS 280	GRAFBROS 280	60121ROCHESTER1	35.02	16.80	18.22	T
2520250	6/1/2021	12:18 PM	GRAFBROS 280	GRAFBROS 280	60121ROCHESTER2	31.42	16.94	14.48	T
2520552	6/1/2021	2:51 PM	GRAFBROS 280	GRAFBROS 280	60121ROCHESTER3	34.27	17.38	16.89	T
2508552	6/2/2021	9:44 AM	GRAFBROS 280	GRAFBROS 280	60221ROCHESTER1	33.48	16.81	16.67	T
2521282	6/2/2021	12:38 PM	GRAFBROS 280	GRAFBROS 280	60221ROCHESTER2	33.39	17.39	16.00	T
2521551	6/2/2021	3:33 PM	GRAFBROS 280	GRAFBROS 280	60221ROCHESTER3	36.27	16.89	19.38	T
2508553	6/3/2021	8:47 AM	GRAFBROS 280	GRAFBROS 280	60321ROCHESTER1	20.82	16.81	4.01	T
2522024	6/9/2021	9:26 AM	GRAFBROS 280	GRAFBROS 280	60921ROCHESTER1	25.75	17.48	8.27	T
2525842	6/9/2021	12:14 PM	GRAFBROS 280	GRAFBROS 280	60921ROCHESTER2	22.51	16.92	5.59	T
2526090	6/9/2021	2:44 PM	GRAFBROS 280	GRAFBROS 280	60921ROCHESTER3	24.01	17.36	6.65	T
2522025	6/10/2021	1:00 PM	GRAFBROS 280	GRAFBROS 280	61021ROCHESTER1	26.51	17.01	9.50	T
2527069	6/10/2021	3:36 PM	GRAFBROS 280	GRAFBROS 280	61021ROCHESTER2	26.74	17.44	9.30	T
2526476	6/11/2021	11:45 AM	GRAFBROS 280	GRAFBROS 280	61121ROCHESTER1	27.09	16.90	10.19	T

c●nnect

Profile Detail Report

Job ID 1003626
2/1/2021 - 8/19/2021

NRC EAST ENVIRONMENTAL SERVICES, INC.
Northern Utilites/Petrolane

2527868	6/11/2021	2:15 PM	GRAFBROS 280	GRAFBROS 280	61121ROCHESTER2	29.71	17.24	12.47	T
2527174	6/14/2021	7:36 AM	GRAFBROS 280	GRAFBROS 280	61421ROCHESTER1	30.32	16.97	13.35	T
2528385	6/14/2021	10:04 AM	GRAFBROS 280	GRAFBROS 280	61421ROCHESTER2	32.45	16.96	15.49	T
2528697	6/14/2021	12:36 PM	GRAFBROS 280	GRAFBROS 280	61421ROCEHSTER3	28.38	16.92	11.46	T
2529000	6/14/2021	3:00 PM	GRAFBROS 280	GRAFBROS 280	61421ROCHESTER4	27.51	17.68	9.83	T
2529007	6/16/2021	7:58 AM	GRAFBROS 280	GRAFBROS 280	61621ROCHESTER1	29.44	16.89	12.55	T
2530470	6/16/2021	10:31 AM	GRAFBROS 280	GRAFBROS 280	61621ROCHESTER2	30.89	16.81	14.08	T
2530794	6/16/2021	1:19 PM	GRAFBROS 280	GRAFBROS 280	61621ROCHESTER3	26.20	16.77	9.43	T
2527667	6/17/2021	11:46 AM	GRAFBROS 280	GRAFBROS 280	61721ROCHESTER1	27.02	17.36	9.66	T
2532144	6/17/2021	2:15 PM	GRAFBROS 280	GRAFBROS 280	61721ROCHESTER2	26.93	16.89	10.04	T
2535681	6/30/2021	7:00 AM	GRAFBROS 280	GRAFBROS 280	63021ROCHESTER1	33.61	17.81	15.80	T
2541684	6/30/2021	9:39 AM	GRAFBROS 280	GRAFBROS 280	63021ROCHESTER2	25.11	16.76	8.35	T
2576375	8/18/2021	2:17 PM	GRAFBROS 280	GRAFBROS 280	81821rochester1	31.55	16.99	14.56	T
2583011	8/19/2021	7:08 AM	GRAFBROS 295	GRAFBROS 295	81921rochester1	28.49	18.51	9.98	T

Number of Loads 92

Sub Total 1,561.21

c●nnect

Profile Detail Report

NRC EAST ENVIRONMENTAL SERVICES, INC.
Northern Utilites/Petrolane

Job ID 1003626
2/1/2021 - 8/19/2021

Total Number of Loads	92	Total	1,561.21

Report Created 8/23/2021 6:10:54 PM

The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Robert R. Scott, Commissioner

EMAIL ONLY

June 30, 2022

Thomas Murphy
Unitil Service Corp.
6 Liberty Lane W
Hampton, NH 03842-1720

Subject: Rochester – Petrolane/Northern Utilities Site, Route 125
DES Site #198712002, Project #432

November 2020 Water Quality Monitoring Data Submittal, prepared by AECOM, and dated January 8, 2021

Soil Management Report Submittal, prepared by AECOM, and dated October 12, 2021

2020 and 2021 Biennial Water Quality Report and November 2021 Water Monitoring Data Submittal, prepared by AECOM, and dated January 20, 2022

Source Material Investigation Report, prepared by AECOM, and dated January 21, 2022

Dear Thomas Murphy:

New Hampshire Department of Environmental Services (NHDES) has completed its review of the above-referenced reports, as prepared by your environmental consultant, AECOM. These reports conveyed the following:

- The Soil Management Report Submittal describes activities conducted to comply with the requirements of the Activity and Use Restriction (AUR) for the site during horizontal drilling to connect a proposed new natural gas regulating station on the site to a gas main extension located on a property on the eastern side of the Cocheco River.
- The 2020 and 2021 Biennial Water Quality Report (Report) describes sampling and reporting required by the site Groundwater Management Permit GWP-198712002-R-006 (Permit) issued July 2, 2018.
- The Source Material Investigation Report describes the activities and findings of recent investigation work to identify remaining source material and evaluate future remedial actions.

NHDES offers the following comments based on our review of the information provided in the above-referenced documents.

Soil Management Report

NHDES finds that the report is complete, and the construction activities were performed in compliance with the site AUR.

November 2020 Data Submittal and 2020 and 2021 Biennial Report

Based on our review of the most-recent water quality data provided (updated through November 2021), we note that the monitoring results generally remain consistent with recent prior findings and that the Report is complete and meets the sampling and reporting requirements detailed in the site Permit.

NHDES notes that a detailed assessment of the effect of the phytoremediation system on groundwater elevation and flow has not been conducted since 2011. Considering the period of time since the last assessment and the current tree die-off from disease observed by AECOM, we request an updated assessment of the effects of the phytoremediation system on site groundwater be included in the next Application for Renewal of Groundwater Management Permit due before July 1, 2023.

Source Material Investigation Report

NHDES concurs with AECOM's recommendation to conduct treatability studies using the bulk samples of impacted site media collected during the Source Material Investigation. Please submit a schedule for performance of the treatability studies and submittal of the proposed Remedial Action Plan within 60 days of the date of this letter.

NHDES notes the following in regard to analytical data included in the Source Material Investigation Report:

- Review of the laboratory analytical reports indicate that some samples were reanalyzed due to elevated concentrations of naphthalene that exceeded the calibration range of the initial analysis; however, the results from the initial analysis are reported in tables and figures without qualifying the data as estimated concentrations. NHDES recommends using data from the second, unqualified analysis or qualifying data, as appropriate, if used for future site assessment work.
- AECOM notes that benzene was not detected above the laboratory reporting limit at any location; however, benzene was detected in soil samples GP-904(9-11')12-03-2020 (reanalysis), GP-905(5-7')12-03-2020, GP-905(5-7')12-03-2020 (reanalysis), GP-906(16-18')12-04-2020 (reanalysis), and GP-907(21.5-23.5')12-04-2020 (second reanalysis). In addition, the reporting limit exceeded SRS for most of the analyzed samples in which benzene was not detected above the reporting limit. NHDES requests that the treatability studies and RAP consider the benzene data.
- On Figure 4-1, AECOM delineates principal and secondary source areas for groundwater impacts based on observation of non-aqueous phase liquid and/or elevated naphthalene concentrations. NHDES notes that, while the delineated areas may be the primary source of groundwater contamination, based on current and historical soil data, soil impacts with concentrations of volatile organic compounds (VOCs) and semi-VOCs exceeding the Soil Remediation Standards (SRS) extend over a greater portion of the site and will continue to be addressed through the site AUR.

Should you have any questions, please contact me at NHDES’ Waste Management Division.

Sincerely,

Waste
Management
Division

Digitally signed by Waste
Management Division
Date: 2022.06.30
17:40:34 -04'00'

Tanya P. Justham
Hazardous Waste Remediation Bureau
Tel: (603) 271-6572
Email: tanya.p.justham@des.nh.gov

ec: Ryan McCarthy, AECOM
Rochester Health Officer
Amy Doherty, P.G., State Sites Supervisor, HWRB

COMPANY NAME

NORTHERN UTILITIES, INC.

SOMERSWORTH GAS WORKS

LINE
NO. SCHEDULE 4C

1. SITE LOCATION: Main Street and Depot Road in Somersworth, NH

2. DATE SITE WAS FIRST INVESTIGATED AS A DISPOSAL SITE:
The New Hampshire Division of Public Health Services and New Hampshire Water Supply and Pollution Control Commission conducted a preliminary assessment in 1985.

3. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES (July 1, 2021 – June 30, 2022):

- Northern directed Wood Environmental (Wood) during the reporting time to continue providing environmental consulting services, focusing on continued groundwater monitoring for the former manufactured gas plant (MGP). In addition, Wood continues to evaluate the effectiveness of the limited excavation, targeted subsurface grouting, and in-situ chemical oxidation (ISCO) treatments, which comprise the remediation program. The most recent ISCO treatment (the third overall) was completed in June 2018. Following sampling and report submittal in 2019, the NH DES directed Northern to include future evaluation of the ISCO treatment's effectiveness, as measured by groundwater contaminants, into the Site's Groundwater Monitoring Program (GMP).

- Wood continued to report that collected data indicated an improvement in groundwater quality following the 2018 ISCO treatment. Persistent low levels of certain contaminants in groundwater were indicative of a residual source mass in the subsurface. In 2011, a supplemental ISCO treatment was delayed to determine if natural attenuation was persistent and sustained. However, collected data from 2013 through 2016 reported repetitive benzene and naphthalene peaks, which required the completion of a third ISCO treatment, as detailed in the initial remediation design for the Site.

- Northern directed Wood to continue sampling groundwater from the four, additional monitoring wells installed in 2014 because of the repetitive benzene and naphthalene peaks during the fall sampling events. Reduced peaks were detected once again during the reporting time period (fall 2021). The NH DES was notified of the results and continued to direct Northern to sample groundwater from the underlying bedrock for the presence of MGP contaminants. Results reported contaminant levels below concern levels, and Northern continues to petition the NH DES to formerly close the four monitoring wells with no authorization granted during the reporting time period.

- Northern directed Wood to sample the groundwater in the underlying bedrock from three locations, as detailed previously by the NH DES with the next groundwater sampling and report submittal due to the NH DES on the effectiveness of the ISCO treatment scheduled for late 2022.

4. NEW HAMPSHIRE SITE REMEDIATION PROGRAM PHASE:

The former Somersworth Gas Works continues to implement the remediation design and monitor its progress via the GMP overseen by the NH DES.

5. NATURE AND SCOPE OF SITE CONTAMINATION:

The very small footprint of the former Somersworth Gas Works made it unlikely that significant amounts of MGP residuals were used as fill on-site. The extensive test-pit program substantiated the assertion that significant amounts of MGP residuals were not used as on-site fill. Coal tars and liquids that may have accumulated in sub-grade vessels did not result in substantial releases, as indicated by the absence of any significant oil-like material in test pits and borings in the upper 10 to 15 feet of soil at the site. Most of the Northern parcel is now covered with re-graded soil from local street work and capped by four (4) inches of imported topsoil.

As indicated by the site-specific groundwater quality data, metals and heavy-weighted polyaromatic hydrocarbons (PAHs) detected in soil have not leached into the underlying groundwater at significant concentrations. However, two suspected sources of lighter-weight PAHs (e.g., naphthalene) and volatile organic compounds (VOCs) detected in groundwater were identified in excess of regulated levels. The suspected sources were two, former gasholders on at the site. Oily residuals of limited extent were found in soil at depth below these holders. This material has been in periodic contact with the fluctuating water table. Due to the MGP operations having ceased more than 70 years ago, the period of rapid degradation of MGP-related chemicals in groundwater has probably occurred. The relatively stable groundwater quality data are indicative of residual source materials undergoing natural biodegradation.

Northern contracted with Wood (formerly Amec Foster Wheeler) to act as prime contractor for design and remediation services. Earthwork activities were awarded to ENPRO and were completed in April 2005. This consisted of the removal of subsurface bodies of tar and the jet grouting of a small area of MGP-impacted soil below a foundation floor. Northern and Amec Foster Wheeler awarded Geo-Cleanse Internal, Inc. the subcontract for the remediation of soil and groundwater using ISCO technology. The installation of oxidant injector wells and the first round of oxidant injection were completed in June 2005. Subsequent injections were conducted in September 2005, May 2006, and November 2006. A notice of an Activity and Use Restrictions (AUR) was been placed on the deed associated with the site.

At the direction of the NH DES, Northern conducted another ISCO treatment during the first half of 2018 to address the continuing PAH and VOC peaks. Natural attenuation remains the preferred approach to long-term remediation of the site. However and following this ISCO treatment, the NH DES has required Northern to sample groundwater from the underlying bedrock for the presence of MGP contaminants. This represents a shift in the site's monitoring requirements from exclusively within the overburden to now the overburden/bedrock. Although Northern is confident the recent ISCO treatment was designed to include the underlying bedrock, groundwater transmissivity through this strata is slow and will likely require additional monitoring time to determine a reduction of the contaminants.

7. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP OF SITE:

Available information indicates that the former gas works began operation as the Great Falls Gas Light Company in 1856 and may have been associated with the mills of the Great Falls Manufacturing Company. The gas company leased two small parcels from the Great Falls Manufacturing Company in 1907, one to the north and one to the south of the main plant site. The plant was deeded to the Strafford-York Gas Company in 1911, which was a predecessor of Allied New Hampshire Gas Company. The Allied New Hampshire Gas Company was eventually merged into Northern Utilities.

At its peak in 1917, the plant was supplying Rochester, East Rochester, Gonic, Somersworth, and Berwick, Maine. Available information indicates that the plant ceased production in 1928, when Rochester's former Manufactured Gas Plant began supplying Somersworth and the surrounding area. The plant appears to have been demolished during the 1930s. Northern constructed a high-pressure Horton Sphere (gas ball) at the site in the late 1940s for storage of propane and natural gas from a high-pressure main. The Horton Sphere was in operation into the 1980s, when it was decommissioned and removed off-site.

8. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS: None

NAME OF SUIT: Not Applicable

DATE FILED: Not Applicable

STATUS (PENDING/SETTLED): Not Applicable