

## August 29, 2023 Update

### Summary of Monthly Tasks Completed Pursuant to Consent Order COWSERU 23-001

#### Region 18, Lyme-Old Lyme Middle School

Turner Environmental has continued to work on the investigation and clean-up of the oil spill at the Old Lyme Middle school. Tasks during the month of August have included additional testing of drinking water wells, installation of an additional recovery well in former Holding Tank area, a geotechnical boring for deeper lithology and determination of depth to bedrock, an additional vac event on the recovery wells and passively recovered oil using oil absorbent oil “pigs” placed in recovery wells between vac events.

Drinking water wells at [REDACTED] and [REDACTED] were resampled on August 29, 2023. No results are available at this time.

Additional details are provided below.

#### Installation of an Additional Recovery Well and Geotechnical Boring

Previously a monitoring well (MW-14) was installed in the former holding tank area following excavation of the area in March 2023. At that time the water table in the former holding tank area was approximately 6.5’ below the top of casing. This well has been tested in the past and used for free product recovery and previous vac events. MW-14 was only approximately eight feet deep and has recently been found to be dry as the water table has dropped over the summer.

A new four-inch diameter recovery well was installed approximately four feet west of MW-14 and designated Recovery Well (RW) 11 (RW-11). This well is a twenty foot deep well with fifteen feet of screen and is in the northwestern quadrant of the former holding tank area. This is the same location as Remedial Boring 1 installed in that area in May 2023 which had high concentrations of ETPH detected in the 10-10.5 ‘sample – 14,100 mg/kg ETPH. RW-11 has shown approximately ½” of free product since its installation which is currently being passively collected with oil absorbent “Pigs”. This well will become one of the primary recovery wells for the pump and treat system being installed on-site.

Additionally, a geotechnical boring was placed slightly east of the release area to establish the depth of bedrock in this area. Previously, boring refusals were encountered at approximately twenty feet below grade. B-19 was placed in the vicinity of MW-1. The boring was advanced to 24 feet below grade where weathered rock and rock fragments were observed. A Boring Log for that boring is included in Attachment A. Based on this and other field observations we believe that bedrock is approximately 24 fbg with several feet of silt and clay just above the bedrock. Drilling was performed by ADT/Cascade on August 9, 2023.

#### Vac Events and Passive Oil Recovery Former Holding Tank Area and Boiler Room

Small amounts of free product have been observed in the former holding tank area and recovery wells in the boiler room in the spring and summer months. As a result, several vac events were performed June 8, June 20 and July 11. Another vac event was performed by ACV Enviro on August 7, 2023. Approximately 1,335 gallons of liquid were removed from the four recovery wells in the boiler room. Based on analyses performed at the receiving facility the liquid was approximately 1 percent oil which means approximately 13.35 gallons of oil were removed by this event.

Subsequent observations show minimal staining on the oil absorbent pad in RW-10, the southernmost well in the boiler room with small amounts of oil recovered passively since that event.

Tim Baird from CT DEEP performed an inspection of the site on August 3, 2023. It is our understanding that no free product was observed in the recovery wells in the boiler room and approximately 0.2" of free product was observed in MW-14 at that time.

We have observed small amounts of free product in the recovery wells during past inspections. No free product has been observed in any of the recovery wells in the boiler room since the August 7 vac event. Some free product was observed in the newest outdoor Recovery well (RW-11) in August from approximately 3/16" up to 1/2".

Turner conservatively estimates approximately 28 gallons of oil have been recovered from passive and active recovery methods since these vac efforts began in June.

### **Additional Monitoring Wells**

Previous sampling and analyses of monitoring wells on and off-site indicate some volatile organics were detected in off-site monitoring wells. A new monitoring well (MW- 18) was installed further west and closer to the drinking water well at [REDACTED] in July, 2023. The location of the new monitoring well along with all existing monitoring wells and groundwater contours using recent data (July 28, 2023) collected based upon water table elevations are shown in Figure 2.

MW-18 was sampled on July 24, 2023. ETPH was detected at 0.203 mg/L, several VOCs were detected including 1, 2, 4 trimethylbenzene at 1.02 ug/L, benzene at 2.97 ug/L, isopropyl benzene at 1.33 ug/L and sec butylbenzene at 0.5 ug/L. Benzene was the only compound exceeding its respective RSR criteria. Several PAHs were also detected including fluoranthene at 0.25 ug/L naphthalene at 0.27 ug/L and phenanthrene at 0.07 ug/L. All PAHs are below their respective RSR Criteria. A copy of the laboratory report is included in Attachment B.

It should be noted that the drinking water wells at [REDACTED] and [REDACTED] were also tested at approximately the same time and no ETPH, VOC or PAHs were detected in those samples.

### **Off-site Drinking Water Wells**

Drinking water well at [REDACTED] and [REDACTED] were sampled again on August 29, 2023, and results are pending.

Figure 3 shows the nearby drinking water wells, the monitoring well network and location of the plume based on the information previously collected.

### **Groundwater Pump and Treat System**

Turner has received approval for a General Permit for the Discharge of Groundwater Remediation Wastewater on July 25, 2023.

Several preliminary tasks to install and operate this system have been completed during August. These include installation of: (1) an electric service panel in the boiler room for the treatment system and air

compressor; (2) an underground discharge line from the area of the treatment system to the stormwater retention galley where the treated water will discharge;(3) a gravel pad where the treatment system conex bow will reside; and (4) the conex box with treatment system components.

Several items still need to be obtained and installed to make the system operational. The air operated diaphragm (AOD) pumps were subject to a back order but delivery is expected during the first week of September. We believe the system start up will occur in the second week of September.

The pump and treat system will operate initially in the former holding tank and boiler room where the oil concentrations are the highest.

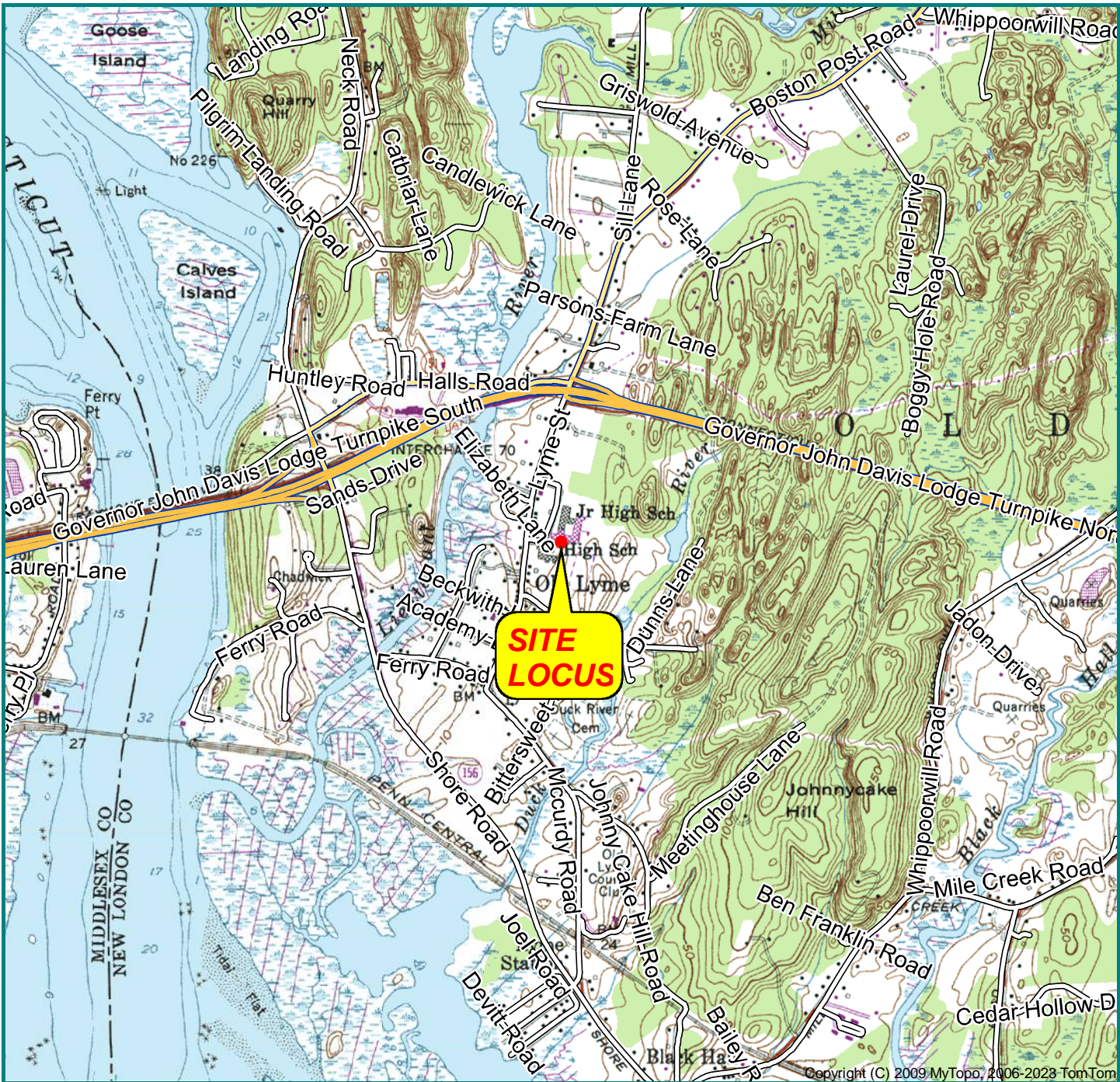
Respectfully submitted,

**TURNER ENVIRONMENTAL, LLC**



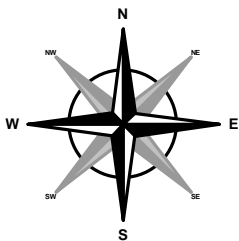
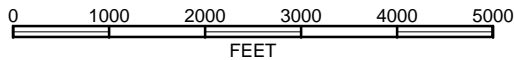
David T. Turner, LEP  
Attachments

## **Figures**



OLD LYME Topographic 1958 41072-C3-TF-024 National Geodetic Vertical Datum 1929

SCALE 1:24000



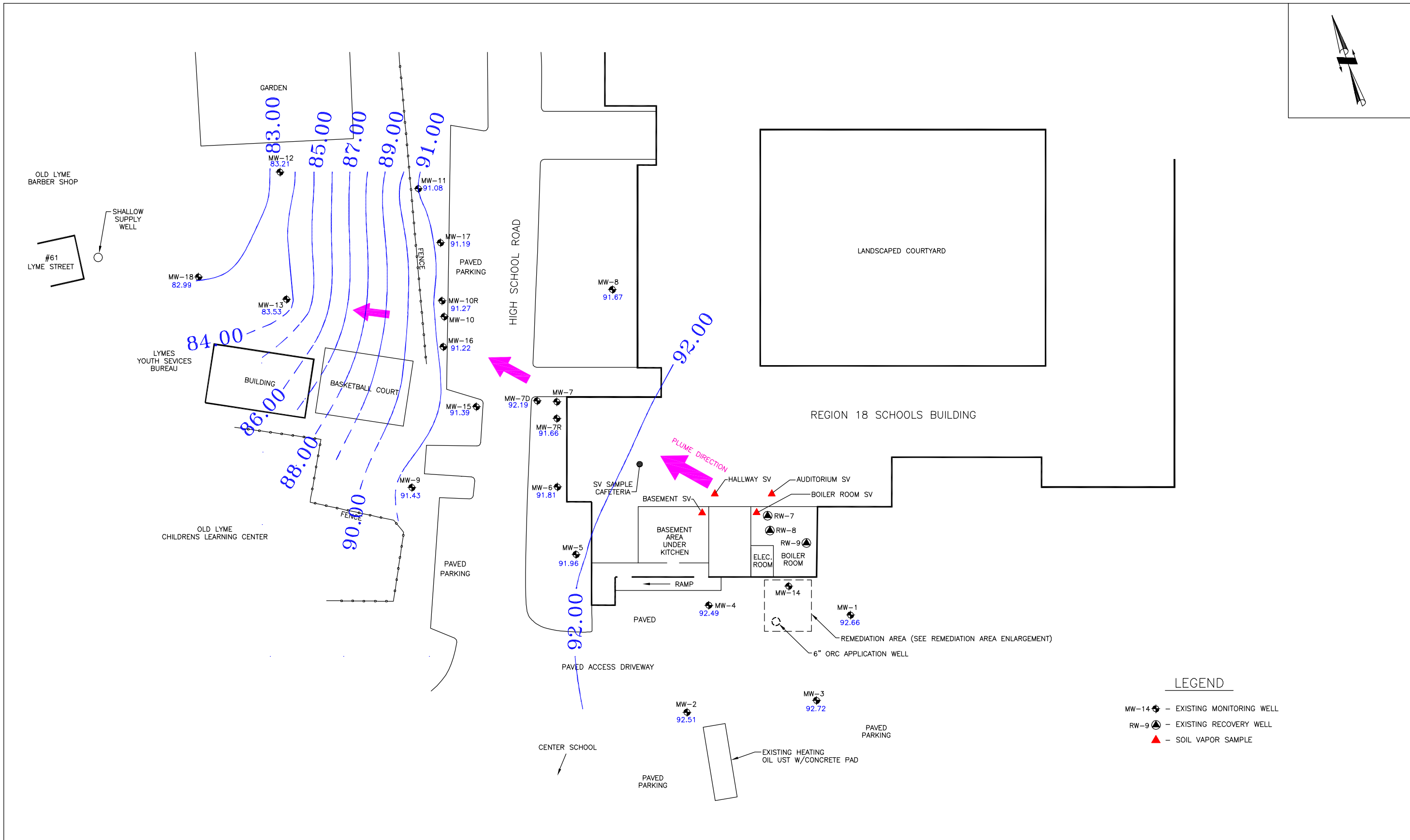
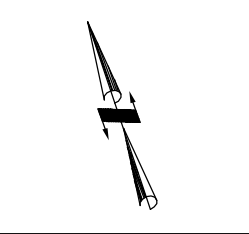
Site Coordinates:  
 041° 19' 04.35" N, 072° 19' 42.04" W

Turner Environmental LLC  
 P.O. Box 581, East Lyme, CT 06333  
 (860) 705-8704 turnerenviro@att.net

Site Location:  
 47 Lyme Street  
 New London County,  
 Old Lyme, CT

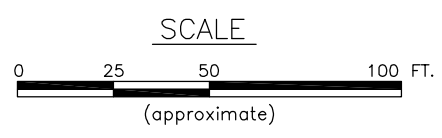
**Figure-1**  
**Site Locus Map**

Project: TE 23-007 Date: 3/9/23

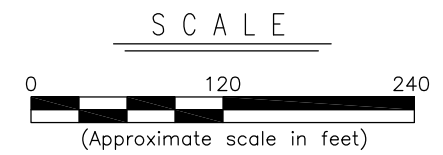
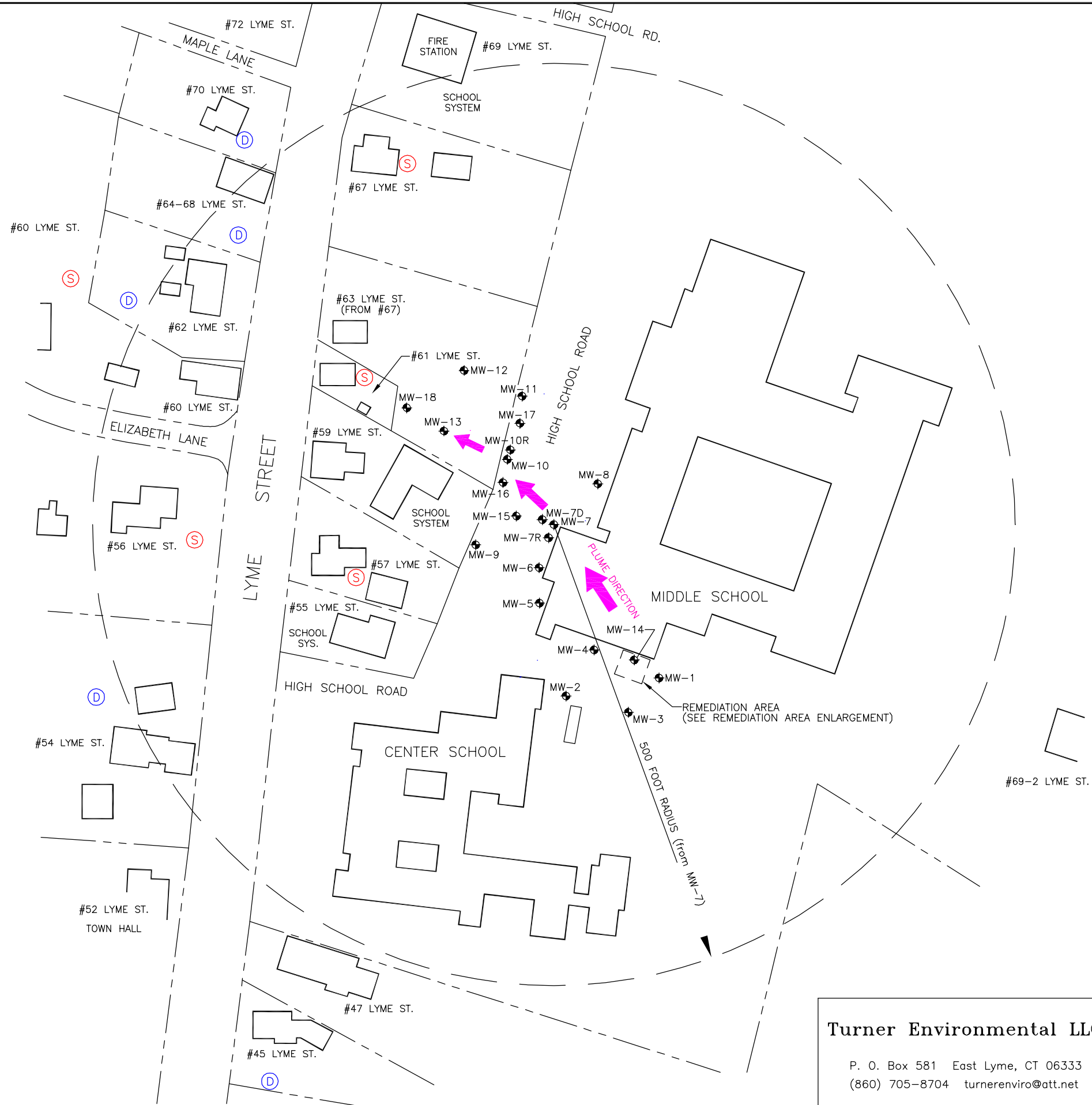


**LEGEND**

- MW-14 - EXISTING MONITORING WELL
- RW-9 - EXISTING RECOVERY WELL
- SOIL VAPOR SAMPLE



<b>Turner Environmental LLC</b> P. O. Box 581 East Lyme, CT 06333 (860) 705-8704 turnerenviro@att.net	<b>Figure 2 - Groundwater Contours</b> (7/28/23 gauging data)	Drawn: K. Hazel Date: 7/31/23 Scale: AS SHOWN
	Client: REGION 18 SCHOOLS 47 Lyme Street Old Lyme, Connecticut	Project: TE23-007 Figure: FIGURE 2



- LEGEND**
- MW-7 - GROUNDWATER MONITORING WELL
  - - - - - APPROXIMATE PROPERTY BOUNDARY
  - SHALLOW SUPPLY WELL
  - DEEP SUPPLY WELL

<b>Turner Environmental LLC</b> P. O. Box 581 East Lyme, CT 06333 (860) 705-8704 turnerenviro@att.net	<b>Figure 3 - Drinking Water Well Locations</b>	Drawn: K. Hazel Date: 7/31/23 Scale: AS SHOWN
	Client: REGION 18 SCHOOLS 47 Lyme Street Old Lyme, Connecticut	Project: TE23-007 Figure: FIGURE 3

## Appendix A: Boring Logs

# TEST BORING AND WELL LOG

<b>TURNER ENVIRONMENTAL</b> P.O. Box 581 East Lyme, CT 06333	<b>PROJECT:</b> Region 18 oil Spill Investigation <b>LOCATION:</b> Behind 63 Lyme Street - abutting property <b>CLIENT:</b> Region 18 <b>PROJECT NO.:</b> TE 23-007	<b>Test Boring No.:</b> <span style="font-size: 1.2em;"><b>MW-18</b></span> <hr/> <b>Total Depth:</b> ft.
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<b>Contractor:</b> GroundH2O <b>Drill Rig:</b> <b>Driller:</b> Mark Larabie <b>Inspector:</b> David Turner	<b>Start Date:</b> 7/17/2023 <b>Finish Date:</b> <b>El. Datum:</b> <b>G.S. Elevation:</b>	<b>Northing:</b> <b>Easting:</b> <b>Longitude:</b> <b>Latitude:</b>	<b>Borehole Dia.:</b> in. <b>Depth to Water:</b> ft. <b>Depth to Rock:</b> ft. <b>Depth of Well:</b> ft.
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Depth (Feet)	Elevation (Feet)	Casing Data	Sample No.	Sample Data	Recovery (Inches)	PID (ppm)	Group Symbol	Stratum and Field Descriptions:	Well Diagram	Field Notes, Well Notes, Comments:
1	-1							0-5' 36" Recovery		Well Type: Prepack Well Location: west of 61 Lyme St. Reference Pt.:  Reference Pt. EL.:
2	-2						12" loam 24" med. Tan SAND with some coarse tan SAND			
3	-3									
4	-4									
5	-5						5-10' 60" Recovery			
6	-6						6' fine tan SAND			
7	-7						35" med tan SAND, some coarse SAND and some gravel, mottled at 8'			
8	-8						18" fine tan SANDw some coarse SAND			
9	-9									
10	-10						10-15' 60" rec.			
11	-11						24" med. Tan SAND			
12	-12						12" fine tan SAND			
13	-13						24" very tan fine sand and silt			
14	-14									
15	-15						15-20' 60" rec.			
16	-16						48" fine tan SAND and SILT			
17	-17						12' dense gray SILT w some coarse SAN			
18	-18						Well (Prepack) set at 15' - 10' screen			
19	-19									
20	-20									


**STANDARD NOTES:** 1. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.  
 2. Samples classified in accordance with ASTM D-2488 unless otherwise noted.  
 3. Test Boring Log Page 1: 0 - 20 feet Each subsequent page: Additional 25 feet.

**DRILLING INFORMATION**

Method:		Casing	Sample	Core
Type:				
Diam.:				

**ADDITIONAL NOTES:**

# TEST BORING LOG


 <p><b>TURNER ENVIRONMENTAL, LLC</b> 860-705-8704</p>	<p><b>P.O. Box 581</b> <b>East Lyme, CT 06333</b></p>	<p><b>PROJECT:</b> Region 18 (Oil Spill Investigation) <b>LOCATION:</b> Old Lyme Middle School <b>CLIENT:</b> Region 18 <b>PROJECT NO.:</b> TE 23-007</p>	<p><b>Test Boring No.:</b> <span style="font-size: 1.5em; font-weight: bold;">TB-19</span></p>
			<p><b>Total Depth:</b> 24 ft.</p>

<p><b>Contractor:</b> Aquifer Drilling &amp; Testing, Inc (A) <b>Drill Rig:</b> GeoProbe 7782DT (Direct Push) <b>Driller:</b> Chris &amp; Chris <b>Inspector:</b> Alan Dion</p>	<p><b>Start Date:</b> 8/9/2023 <b>Finish Date:</b> 8/9/2023 <b>El. Datum:</b> - <b>G.S. Elevation:</b> 0.00</p>	<p><b>Northing:</b> - <b>Easting:</b> - <b>Longitude:</b> - <b>Latitude:</b> -</p>	<p><b>Borehole Dia.:</b> 2 in. <b>Depth to Water:</b> (est.) 7 ft. <b>Depth to Rock*:</b> 24 ft. *refusal</p>
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Depth (Feet)	Elevation (Feet)	Casing Data	Sample No.	Sample Data	Recovery (Inches)	PID (ppm)	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
0-5	-1 -2 -3 -4 -5		1		45	N/A		0 - 3" Grass/root layer 6" Lt brn, loose, F-C SAND. Trace F.Gravel & Silt. Dry. 5" Brown, loose, F-C SAND. Trace F.Gravel & Silt. Dry. 6" Lt brn, loose, F-C SAND. Trace F.Gravel & Silt. Dry. 6" Dk brn, loose, F-C SAND. Trace F.Gravel & Silt. Dry. 19" Loose, Mottled F-C SAND. Some Gravel. Dry.	
5-10	-6 -7 -8 -9 -10		2		48	N/A		16" Loose, Mottled F-C SAND. Some Gravel. Dry. 3" Loose, F-C SAND. Some Gravel. Orange/oxidized. Wet. 7" MED-DENSE F. SAND & SILT. Tan. Wet. 22" Loose, F-C SAND. Trace F.Gravel. Tan. Wet.	
10-15	-11 -12 -13 -14 -15		3		60	N/A		45" Loose, F-C SAND. Trace C.Gravel. Tan. Wet. 15" MED-DENSE SILT. Gray/Tan. Wet.	
15-20	-16 -17 -18 -19 -20		4		60*	N/A		*(60-inch recovery incl. 10-inch Backfall material) 32" MED-DENSE SILT. Gray/Tan. Wet. 2" MED-STIFF Silty CLAY. Gray. Wet. 6" MED-DENSE SAND, SILT & CLAY. Gray. Wet. 10" MED-STIFF Silty CLAY. Trace C. Gravel. Gray. Wet.	

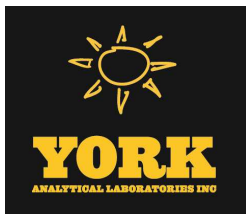
<p><b>STANDARD NOTES:</b> 1. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.                  2. Samples classified in accordance with ASTM D-2488 unless otherwise noted.                  3. Test Boring Log Page 1: 0 - 20 feet Each subsequent page: Additional 25 feet.</p>	<p style="text-align: center;"><b><u>DRILLING INFORMATION</u></b></p> <p>Method: Direct Push</p>																
<p><b>ADDITIONAL NOTES:</b>                  Geotechnical sampling achieved using dedicated, two-inch diameter, 60-inch GeoProbe sampling sleeves.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">Casing</td> <td style="text-align: center;">Sample</td> <td style="text-align: center;">Core</td> </tr> <tr> <td>Type:</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>Diam.:</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>Weight:</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> </table>		Casing	Sample	Core	Type:	X	X	X	Diam.:	X	X	X	Weight:	X	X	X
	Casing	Sample	Core														
Type:	X	X	X														
Diam.:	X	X	X														
Weight:	X	X	X														

# TEST BORING LOG

 <b>TURNER ENVIRONMENTAL LLC</b> P.O. Box 581 East Lyme, CT 06333 860-705-8704		<b>PROJECT:</b> Region 18 (Oil Spill Investigation) <b>LOCATION:</b> Old Lyme Middle School <b>CLIENT:</b> Region 18 <b>PROJECT NO.:</b> TE 23-007						<b>Test Boring No.:</b> <span style="font-size: 1.5em; font-weight: bold;">TB-19</span>	
								<b>Total Depth:</b> 24 ft.	
Depth (Feet)	Elevation (Feet)	Casing Data	Sample No.	Sample Data	Recovery (Inches)	PID (ppm)	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
20-24			5		60*	N/A		*(60-inch recovery approx. 37-inch Backfall material) 5" MED-STIFF Silty CLAY. Trace C. Gravel. Gray. Wet. 18" F-COARSE SAND, ROCK FRAGMENTS, WEATHERED ROCK Tan, Orange & Gray. Wet. REFUSAL @ ~24 feet bgs	
	-21								
	-22								
	-23								
	-24								
	-25								
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**ADDITIONAL NOTES:**

Appendix B:  
Laboratory Report MW-18



# Technical Report

prepared for:

**Turner Environmental, LLC**  
68 Ridge Hill Rd.  
Oakdale CT, 06357  
**Attention: David Turner**

Report Date: 08/04/2023  
**Client Project ID: TE 23-007 Region 18**  
York Project (SDG) No.: 23G1414

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE  
www.YORKLAB.com

STRATFORD, CT 06615  
(203) 325-1371

132-02 89th AVENUE  
FAX (203) 357-0166

RICHMOND HILL, NY 11418  
ClientServices@yorklab.com

Report Date: 08/04/2023  
Client Project ID: TE 23-007 Region 18  
York Project (SDG) No.: 23G1414

**Turner Environmental, LLC**  
68 Ridge Hill Rd.  
Oakdale CT, 06357  
Attention: David Turner

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## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on July 25, 2023 and listed below. The project was identified as your project: **TE 23-007 Region 18**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
23G1414-01	MW-18	Water	07/24/2023	07/25/2023

## **General Notes for York Project (SDG) No.: 23G1414**

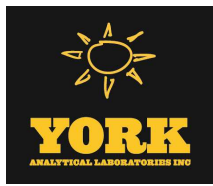
1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

Cassie L Mosher  
Laboratory Manager

**Date:** 08/04/2023





### Sample Information

**Client Sample ID:** MW-18

**York Sample ID:** 23G1414-01

<u>York Project (SDG) No.</u> 23G1414	<u>Client Project ID</u> TE 23-007 Region 18	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 24, 2023 1:40 pm	<u>Date Received</u> 07/25/2023
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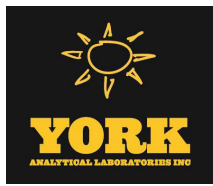
**VOA, 8260 RCP LOW MASTER**

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-34-3	1,1-Dichloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
563-58-6	1,1-Dichloropropylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>1.02</b>		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
106-93-4	1,2-Dibromoethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
107-06-2	1,2-Dichloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
78-87-5	1,2-Dichloropropane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
142-28-9	1,3-Dichloropropane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
594-20-7	2,2-Dichloropropane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
78-93-3	2-Butanone	ND	QL-02	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
95-49-8	2-Chlorotoluene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
591-78-6	2-Hexanone	ND	QL-02	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
106-43-4	4-Chlorotoluene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
108-10-1	4-Methyl-2-pentanone	ND	ICVE, QL-02	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
67-64-1	Acetone	ND	CCVE, ICVE, QL-02	ug/L	2.00	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
107-13-1	Acrylonitrile	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
71-43-2	<b>Benzene</b>	<b>2.97</b>		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
108-86-1	Bromobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
74-97-5	Bromochloromethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-27-4	Bromodichloromethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-25-2	Bromoform	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
74-83-9	Bromomethane	ND	CCVE, QL-02	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA



### Sample Information

**Client Sample ID:** MW-18

**York Sample ID:** 23G1414-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

23G1414

TE 23-007 Region 18

Water

July 24, 2023 1:40 pm

07/25/2023

**VOA, 8260 RCP LOW MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-15-0	Carbon disulfide	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
56-23-5	Carbon tetrachloride	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
108-90-7	Chlorobenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-00-3	Chloroethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
67-66-3	Chloroform	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
74-87-3	Chloromethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
124-48-1	Dibromochloromethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
74-95-3	Dibromomethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-71-8	Dichlorodifluoromethane	ND	CAL-E	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
100-41-4	Ethyl Benzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
87-68-3	Hexachlorobutadiene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
98-82-8	<b>Isopropylbenzene</b>	<b>1.33</b>		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
80-62-6	Methyl Methacrylate	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-09-2	Methylene chloride	ND		ug/L	2.00	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
91-20-3	Naphthalene	ND		ug/L	2.00	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
104-51-8	n-Butylbenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
103-65-1	n-Propylbenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
95-47-6	o-Xylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
179601-23-1	p- & m- Xylenes	ND		ug/L	1.00	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
99-87-6	p-Isopropyltoluene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
135-98-8	<b>sec-Butylbenzene</b>	<b>0.500</b>		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
100-42-5	Styrene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
98-06-6	tert-Butylbenzene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
127-18-4	Tetrachloroethylene	ND	ICVE, QL-02	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
109-99-9	Tetrahydrofuran	ND	CAL-E	ug/L	4.00	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
108-88-3	Toluene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
110-57-6	trans-1,4-dichloro-2-butene	ND	ICVE	ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
79-01-6	Trichloroethylene	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-69-4	Trichlorofluoromethane	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
75-01-4	Vinyl Chloride	ND		ug/L	0.500	1	EPA 8260C	07/28/2023 12:30	07/29/2023 03:00	SMA
	<b>Surrogate Recoveries</b>	<b>Result</b>		<b>Acceptance Range</b>						
17060-07-0	Surrogate: SURR: 1,2-Dichloroethane-d4	102 %		70-130						
2037-26-5	Surrogate: SURR: Toluene-d8	97.5 %		70-130						
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	98.6 %		70-130						



### Sample Information

**Client Sample ID:** MW-18

**York Sample ID:** 23G1414-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

23G1414

TE 23-007 Region 18

Water

July 24, 2023 1:40 pm

07/25/2023

**SVOA, 8270 LOW RCP MASTER**

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-57-6	2-Methylnaphthalene	ND		ug/L	5.00	1	EPA 8270D	07/29/2023 08:18	08/01/2023 19:49	KH
	<b>Surrogate Recoveries</b>	<b>Result</b>			<b>Acceptance Range</b>					
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	72.8 %			30-130					
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	71.7 %			30-130					
1718-51-0	Surrogate: SURR: Terphenyl-d14	80.8 %			30-130					

**SVOA, 8270 SIM RCP MASTER**

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
208-96-8	Acenaphthylene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
120-12-7	Anthracene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
56-55-3	Benzo(a)anthracene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
218-01-9	Chrysene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
206-44-0	Fluoranthene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
86-73-7	<b>Fluorene</b>	<b>0.250</b>		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
91-20-3	<b>Naphthalene</b>	<b>0.270</b>		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
85-01-8	<b>Phenanthrene</b>	<b>0.0700</b>		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH
129-00-0	Pyrene	ND		ug/L	0.0500	1	EPA 8270D SIM	07/29/2023 08:18	08/03/2023 03:03	KH

**Extractable Total Petroleum Hydrocarbons (ETPH)**

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
CT ETPH	<b>ETPH (Extractable Total Petroleum Hydrocarbons)</b>	<b>0.203</b>		mg/L	0.150	1	CT DEP ETPH	07/27/2023 11:41	07/27/2023 22:40	GXB
	<b>Surrogate Recoveries</b>	<b>Result</b>			<b>Acceptance Range</b>					
3386-33-2	Surrogate: 1-Chlorooctadecane	53.1 %			30-140					



REASONABLE CONFIDENCE PROTOCOL

LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: York Analytical Laboratories, Inc. - Strat Client: Turner Environmental, LLC
Project Location: TE 23-007 Region 18 Lab Project No.: 23G1414
Laboratory Sample ID(s): 23G1414-01 Sampling Date(s): 07/24/2023
RCP Methods Used: See Narrative and Method Reference Section of this Technical Report

Table with 3 columns: Question ID, Question Text, and Answer. Contains 10 rows of QA/QC questions and answers.

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to questions #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.
Authorized Signature: [Handwritten Signature] Position: Laboratory Manager
Printed Name: Cassie L. Mosher Date: 08/04/2023





## York Narrative- CTDEEP RCP Introduction

This Work Order Narrative includes the following items for full review of any quality issues encountered with samples and their analyses for the parameters requested:

1. Sample Receipt Information, including a Sample Summary which cross references your sample ID with York Analytical sample ID, identifying the matrix and Date/Time collected and received at York.
2. Analysis Methodologies employed for the work order
3. Any Sample Issues encountered such as Holding time exceedances, improper containers/preservation, or any related issue with sample integrity
4. Specific Analysis Findings in order: Volatiles, Semi-Volatiles, Pesticides/PCBs, Herbicides, other GC parameters, Metals, Mercury, Wet Chemistry.
5. Analysis Findings Include:
  - BIAS Summary Report-Multiple Lines of Evidence
  - Analyte qualifier summary
  - Samples and associated Calibration Curve(s)
  - Calibration Outliers Discussion/Tabular presentation and affected samples
  - Initial Calibration Verification (ICV) information
  - Batch QC Sample Performance (Blanks, Blank Spikes (BS), MS/MSD)
  - Internal Standard Performance
  - Surrogate Performance
  - Example Calculations

# Work Order Narrative

York Analytical Work Order No.: 23G1414

Client : Turner Environmental, LLC

Client Project ID : TE 23-007 Region 18

Prepared for : David Turner

## 1.0) Introduction

This work order Narrative applies to the following samples submitted to our laboratory on: 07/25/2023 4:15 PM

- 1 sample(s) were received intact in a custody-sealed cooler(s) unless otherwise noted. Upon receipt, cooler temperature(s) was determined using a NIST traceable digital infrared thermometer. The cooler temperature was acceptable ( $\leq 6$  °C) and documented as: {2.9}°C

## Sample Summary

<u>SampleName</u>	<u>Lab Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
MW-18	23G1414-01	Water	07/24/2023 1:40 PM	07/25/2023 4:15 PM

## York Analytical Work Order Narrative

### 2.0 Methodology

<u>Analysis Class</u>	<u>Preparation Method</u>	<u>Analysis Methodology</u>
VOA	EPA 5030B	EPA 8260C
SVOA	EPA 3510C	EPA 8270D
SVOA	EPA 3510C	EPA 8270D SIM
GC	EPA 3545A	CT DEP ETPH
GC	EPA SW846-3510C Low Level	CT DEP ETPH

### Analyte List

<u>Method</u>	<u>Analyte</u>
CT DEP ETPH	ETPH (Extractable Total Petroleum Hydrocarbons)
EPA 8260C	1,1,1,2-Tetrachloroethane ; 1,1,1-Trichloroethane ; 1,1,2,2-Tetrachloroethane ; 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) ; 1,1,2-Trichloroethane ; 1,1-Dichloroethane ; 1,1-Dichloroethylene ; 1,1-Dichloropropylene ; 1,2,3-Trichlorobenzene ; 1,2,3-Trichloropropane ; 1,2,4-Trichlorobenzene ; 1,2,4-Trimethylbenzene ; 1,2-Dibromo-3-chloropropane ; 1,2-Dibromoethane ; 1,2-Dichlorobenzene ; 1,2-Dichloroethane ; 1,2-Dichloropropane ; 1,3,5-Trimethylbenzene ; 1,3-Dichlorobenzene ; 1,3-Dichloropropane ; 1,4-Dichlorobenzene ; 2,2-Dichloropropane ; 2-Butanone ; 2-Chlorotoluene ; 2-Hexanone ; 4-Chlorotoluene ; 4-Methyl-2-pentanone ; Acetone ; Acrylonitrile ; Benzene ; Bromobenzene ; Bromochloromethane ; Bromodichloromethane ; Bromoform ; Bromomethane ; Carbon disulfide ; Carbon tetrachloride ; Chlorobenzene ; Chloroethane ; Chloroform ; Chloromethane ; cis-1,2-Dichloroethylene ; cis-1,3-Dichloropropylene ; Dibromochloromethane ; Dibromomethane ; Dichlorodifluoromethane ; Ethyl Benzene ; Hexachlorobutadiene ; Isopropylbenzene ; Methyl Methacrylate ; Methyl tert-butyl ether (MTBE) ; Methylene chloride ; Naphthalene ; n-Butylbenzene ; n-Propylbenzene ; o-Xylene ; p- & m- Xylenes ; p-Isopropyltoluene ; sec-Butylbenzene ; Styrene ; tert-Butylbenzene ; Tetrachloroethylene ; Tetrahydrofuran ; Toluene ; trans-1,2-Dichloroethylene ; trans-1,3-Dichloropropylene ; trans-1,4-dichloro-2-butene ; Trichloroethylene ; Trichlorofluoromethane ; Vinyl Chloride
EPA 8270D	2-Methylnaphthalene
EPA 8270D SIM	Acenaphthene ; Acenaphthylene ; Anthracene ; Benzo(a)anthracene ; Benzo(a)pyrene ; Benzo(b)fluoranthene ; Benzo(g,h,i)perylene ; Benzo(k)fluoranthene ; Chrysene ; Dibenzo(a,h)anthracene ; Fluoranthene ; Fluorene ; Indeno(1,2,3-cd)pyrene ; Naphthalene ; Phenanthrene ; Pyrene

### 3.0 Sample Issues

No issues were encountered with the samples submitted other than those detailed below.

## York Analytical Work Order Narrative

### Qualifier Summary Report:

SampleID	Method	LabNumber	Matrix	Analyte	Qualifier
MW-18	EPA 8260C	23G1414-01	Water	2-Butanone	QL-02
MW-18	EPA 8260C	23G1414-01	Water	2-Hexanone	QL-02
MW-18	EPA 8260C	23G1414-01	Water	4-Methyl-2-pentanone	ICVE
MW-18	EPA 8260C	23G1414-01	Water	4-Methyl-2-pentanone	QL-02
MW-18	EPA 8260C	23G1414-01	Water	Acetone	CCVE
MW-18	EPA 8260C	23G1414-01	Water	Acetone	ICVE
MW-18	EPA 8260C	23G1414-01	Water	Acetone	QL-02
MW-18	EPA 8260C	23G1414-01	Water	Bromomethane	QL-02
MW-18	EPA 8260C	23G1414-01	Water	Bromomethane	CCVE
MW-18	EPA 8260C	23G1414-01	Water	Dichlorodifluoromethane	CAL-E
MW-18	EPA 8260C	23G1414-01	Water	Tetrachloroethylene	QL-02
MW-18	EPA 8260C	23G1414-01	Water	Tetrachloroethylene	ICVE
MW-18	EPA 8260C	23G1414-01	Water	Tetrahydrofuran	CAL-E
MW-18	EPA 8260C	23G1414-01	Water	trans-1,4-dichloro-2-butene	ICVE
	EPA 8260C	S3G1837-SCV1	Water	4-Methyl-2-pentanone	ICVE
	EPA 8260C	S3G1837-SCV1	Water	Acetone	ICVE20
	EPA 8260C	S3G1837-SCV1	Water	Acetone	ICVE
	EPA 8260C	S3G1837-SCV1	Water	Tetrachloroethylene	ICVE
	EPA 8260C	S3G1837-SCV1	Water	Tetrachloroethylene	ICVE20
	EPA 8260C	S3G1837-SCV1	Water	trans-1,4-dichloro-2-butene	ICVE

### **Qualifier Definitions :**

CAL-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%)
CCVE	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
ICVE	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 30% of expected value).
ICVE20	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 20% of expected value).
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.

## York Analytical Work Order Narrative

### 4.0 Analysis Issues

#### **EPA 8260C**

No problems were encountered with analysis of the samples, other than detailed below.

#### **Initial Calibration : SG30024**

Samples and QC analyzed using this calibration / sequence.

Calibration	Batch	Sequence	SampleName	LabNumber	Instrument	File ID
<b>SG30024</b>	S3G1837	S3G1837	Secondary Cal Check	S3G1837-SCV1	VOA No. 10	V10C019019.D
<b>SG30024</b>	S3G3131	S3G3131	Calibration Check	S3G3131-CCV1	VOA No. 10	V10C019357.D
<b>SG30024</b>	BG31643	S3G3131	LCS	BG31643-BS1	VOA No. 10	V10C019359.D
<b>SG30024</b>	BG31643	S3G3131	LCS Dup	BG31643-BSD1	VOA No. 10	V10C019360.D
<b>SG30024</b>	BG31643	S3G3131	Blank	BG31643-BLK1	VOA No. 10	V10C019362.D
<b>SG30024</b>	BG31643	S3G3131	MW-18	23G1414-01	VOA No. 10	V10C019373.D

**Initial calibration for EPA 8260C exceeded method guidelines.**

Calibration	Intrument	Calibration Date	File ID
<b>SG30024</b>	VOA No. 10	7/17/2023 8:00:08 AM	V10C019007.D

Analyte	RSD%	RSDLim	<MinRRF	RRFLim	CorrCoeff	CCOut	SIM	CAL curve
Dichlorodifluoromethane	<b>15.19</b>	15						Avg
Tetrahydrofuran	<b>19.18</b>	15	<b>0.0471</b>	0.05				Avg

The following QC and or client samples were affected:

SampleName	LabNumber	SourceSample	File ID
Secondary Cal Check	S3G1837-SCV1		V10C019019.D
Calibration Check	S3G3131-CCV1		V10C019357.D
LCS	BG31643-BS1		V10C019359.D
LCS Dup	BG31643-BSD1		V10C019360.D

## York Analytical Work Order Narrative

### EPA 8260C

#### Initial Calibration Verification-

The initial calibration verification for analytical method EPA 8260C

all target compounds recovered within method limits with the following exceptions:

Calibration ID	Lab Number	Analyte	True Value	Result	Recovery%	Limits
<b>SG30024</b>	S3G1837-SCV1	4-Methyl-2-pentanone	10.0	7.43	<b>74.3</b>	80 - 120
<b>SG30024</b>	S3G1837-SCV1	Acetone	10.0	5.50	<b>55.0</b>	80 - 120
<b>SG30024</b>	S3G1837-SCV1	Tetrachloroethylene	10.0	5.39	<b>53.9</b>	80 - 120
<b>SG30024</b>	S3G1837-SCV1	trans-1,4-dichloro-2-butene	10.0	7.81	<b>78.1</b>	80 - 120

*The following QC and or client samples were affected:*

LabNumber	SampleName	File ID
S3G3131-CCV1	Calibration Check	V10C019357.D
BG31643-BS1	LCS	V10C019359.D
BG31643-BSD1	LCS Dup	V10C019360.D

#### Continuing Calibration Verification-

Calibration	Sequence	LabNumber	File ID	Date / Time
<b>SG30024</b>	S3G3131	S3G3131-CCV1	V10C019357.D	07/28/23 19:54

The continuing calibration verification exceeded method limits for the following analytes.

Calibration	LabNumber	Analyte	Units	Result	TrueVal	REC%	Limits	File ID
<b>SG30024</b>	S3G3131-CCV1	Acetone	ug/L	6.20	10.0	<b>62</b>	70 130	V10C019357.D
<b>SG30024</b>	S3G3131-CCV1	Bromomethane	ug/L	6.03	10.0	<b>60.3</b>	70 130	V10C019357.D

*The following QC and or client samples were affected:*

Calibration	Sequence	LabNumber	SampleName	Source Sample	File ID
<b>SG30024</b>	S3G3131	BG31643-BS1	LCS		V10C019359.D
<b>SG30024</b>	S3G3131	BG31643-BSD1	LCS Dup		V10C019360.D

## York Analytical Work Order Narrative

### EPA 8260C

#### Batch QC

**Method Blank-** No reportable target compounds were detected in the method blank(s)

	Batch	Sequence	Instrument	Blank	FileID
VOA	BG31643	S3G3131	VOA No. 10	BG31643-BLK1	V10C019362.D

#### Laboratory Control Sample (LCS) or Standard Reference Material (SRM)-

Were run as batch QC for this project. Please refer to the Quality Control Data attached to this report for bias information.

Calibration	Sequence	LabNumber	SampleName	File ID
<b>SG30024</b>	S3G3131	BG31643-BS1	LCS	V10C019359.D
<b>SG30024</b>	S3G3131	BG31643-BSD1	LCS Dup	V10C019360.D

Sequence	SampleName	LabNumber	Analyte	DupRec%	Rec%	RPD%	REC Limits	RPD Limit
S3G3131	LCS	BG31643-BS1	2-Hexanone		<b>62.7</b>		70 - 130	
S3G3131	LCS	BG31643-BS1	4-Methyl-2-pentanone		<b>60.3</b>		70 - 130	
S3G3131	LCS	BG31643-BS1	Acetone		<b>41.8</b>		70 - 130	
S3G3131	LCS	BG31643-BS1	Bromomethane		<b>62.7</b>		70 - 130	
S3G3131	LCS	BG31643-BS1	Tetrachloroethylene		<b>49.6</b>		70 - 130	
S3G3131	LCS Dup	BG31643-BSD1	2-Butanone	81.8	<b>69.6</b>	16.1	70 - 130	30
S3G3131	LCS Dup	BG31643-BSD1	2-Hexanone	62.7	<b>64.8</b>	3.29	70 - 130	30
S3G3131	LCS Dup	BG31643-BSD1	4-Methyl-2-pentanone	60.3	<b>60.4</b>	0.166	70 - 130	30
S3G3131	LCS Dup	BG31643-BSD1	Acetone	41.8	<b>45.6</b>	8.7	70 - 130	30
S3G3131	LCS Dup	BG31643-BSD1	Bromomethane	62.7	<b>63.4</b>	1.11	70 - 130	30
S3G3131	LCS Dup	BG31643-BSD1	Tetrachloroethylene	49.6	<b>46.7</b>	6.02	70 - 130	30

### EPA 8260C

**Dilutions:** No sample dilutions were required.

## York Analytical Work Order Narrative

**EPA 8260C**

### Internal Standards / Surrogates

Internal Standards Issues: No issues were encountered.

Surrogate Issues: No issues were encountered.

#### Surrogate RT summary

Calibration	SampleName	LabNumber	Analyte	Rec %	RT	CalRT	RTDiff	RT Lim	RT Q
<b>SG30024</b>	Secondary Cal Check	S3G1837-SCV1	SURR: 1,2-Dichloroethane-d4	<b>98.8</b>	<b>5.508</b>	<b>5.50725</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	Secondary Cal Check	S3G1837-SCV1	SURR: Toluene-d8	<b>100</b>	<b>7.35</b>	<b>7.34925</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	Secondary Cal Check	S3G1837-SCV1	SURR: p-Bromofluorobenzene	<b>96.9</b>	<b>10.09</b>	<b>10.089</b>	<b>0.0010</b>	<b>1.00</b>	
<b>SG30024</b>	Calibration Check	S3G3131-CCV1	SURR: 1,2-Dichloroethane-d4	<b>102</b>	<b>5.508</b>	<b>5.50725</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	Calibration Check	S3G3131-CCV1	SURR: Toluene-d8	<b>95.6</b>	<b>7.35</b>	<b>7.34925</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	Calibration Check	S3G3131-CCV1	SURR: p-Bromofluorobenzene	<b>93.8</b>	<b>10.09</b>	<b>10.089</b>	<b>0.0010</b>	<b>1.00</b>	
<b>SG30024</b>	LCS	BG31643-BS1	SURR: 1,2-Dichloroethane-d4	<b>99.2</b>	<b>5.508</b>	<b>5.50725</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	LCS	BG31643-BS1	SURR: Toluene-d8	<b>95.4</b>	<b>7.35</b>	<b>7.34925</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	LCS	BG31643-BS1	SURR: p-Bromofluorobenzene	<b>95.5</b>	<b>10.086</b>	<b>10.089</b>	<b>-0.0030</b>	<b>1.00</b>	
<b>SG30024</b>	LCS Dup	BG31643-BSD1	SURR: 1,2-Dichloroethane-d4	<b>102</b>	<b>5.508</b>	<b>5.50725</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	LCS Dup	BG31643-BSD1	SURR: Toluene-d8	<b>95.3</b>	<b>7.347</b>	<b>7.34925</b>	<b>-0.0022</b>	<b>1.00</b>	
<b>SG30024</b>	LCS Dup	BG31643-BSD1	SURR: p-Bromofluorobenzene	<b>96.2</b>	<b>10.09</b>	<b>10.089</b>	<b>0.0010</b>	<b>1.00</b>	
<b>SG30024</b>	Blank	BG31643-BLK1	SURR: 1,2-Dichloroethane-d4	<b>101</b>	<b>5.508</b>	<b>5.50725</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	Blank	BG31643-BLK1	SURR: Toluene-d8	<b>98.2</b>	<b>7.347</b>	<b>7.34925</b>	<b>-0.0022</b>	<b>1.00</b>	
<b>SG30024</b>	Blank	BG31643-BLK1	SURR: p-Bromofluorobenzene	<b>103</b>	<b>10.086</b>	<b>10.089</b>	<b>-0.0030</b>	<b>1.00</b>	
<b>SG30024</b>	MW-18	23G1414-01	SURR: 1,2-Dichloroethane-d4	<b>102</b>	<b>5.508</b>	<b>5.50725</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	MW-18	23G1414-01	SURR: Toluene-d8	<b>97.5</b>	<b>7.35</b>	<b>7.34925</b>	<b>0.0008</b>	<b>1.00</b>	
<b>SG30024</b>	MW-18	23G1414-01	SURR: p-Bromofluorobenzene	<b>98.6</b>	<b>10.09</b>	<b>10.089</b>	<b>0.0010</b>	<b>1.00</b>	

## York Analytical Work Order Narrative

### 4.0 Analysis Issues

#### EPA 8270D SIM                    Analysis

No problems were encountered with analysis of the samples, other than detailed below.

#### ***Initial Calibration : SE30037***

Samples and QC analyzed using this calibration / sequence.

Calibration	Batch	Sequence	SampleName	LabNumber	Instrument	File ID
SE30037	S3E1916	S3E1916	Secondary Cal Check	S3E1916-SCV1	BNA#6	SV646619.D
SE30037	S3H0311	S3H0311	Calibration Check	S3H0311-CCV1	BNA#6	SV647774.D
SE30037	BG31686	S3H0311	MW-18	23G1414-01	BNA#6	SV647793.D

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***Initial calibration for EPA 8270D SIM met method guidelines.***

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#### EPA 8270D SIM                    SIM Analysis

#### ***Continuing Calibration Verification-***

Calibration	Sequence	LabNumber	File ID	Date / Time
SE30037	S3H0311	S3H0311-CCV1	SV647774.D	08/02/23 17:22

The continuing calibration verification recovered within method limits.

#### EPA 8270D SIM                    SIM Analysis

#### ***Batch QC***

**Method Blank-** No reportable target compounds were detected in the method blank(s)

#### ***Laboratory Control Sample (LCS) or Standard Reference Material (SRM)-***

Were run as batch QC for this project. Please refer to the Quality Control Data attached to this report for bias information.

#### EPA 8270D SIM                    SIM Analysis

**Dilutions:** No sample dilutions were required.

## York Analytical Work Order Narrative

EPA 8270D SIM

SIM Analysis

### Internal Standards / Surrogates

Internal Standards Issues: No issues were encountered.

Surrogate RT summary

## York Analytical Work Order Narrative

### 4.0 Analysis Issues

#### EPA 8270D

No problems were encountered with analysis of the samples, other than detailed below.

#### **Initial Calibration : SE30038**

Samples and QC analyzed using this calibration / sequence.

Calibration	Batch	Sequence	SampleName	LabNumber	Instrument	File ID
SE30038	S3E1927	S3E1927	Secondary Cal Check	S3E1927-SCV1	BNA #3	SV3015442.D
SE30038	S3H0125	S3H0125	Calibration Check	S3H0125-CCV1	BNA #3	SV3016574.D
SE30038	BG31686	S3H0125	Blank	BG31686-BLK1	BNA #3	SV3016575.D
SE30038	BG31686	S3H0125	LCS	BG31686-BS1	BNA #3	SV3016576.D
SE30038	BG31686	S3H0125	LCS Dup	BG31686-BSD1	BNA #3	SV3016577.D
SE30038	S3H0218	S3H0218	Calibration Check	S3H0218-CCV1	BNA #3	SV3016585.D
SE30038	BG31686	S3H0218	MW-18	23G1414-01	BNA #3	SV3016593.D

**Initial calibration for EPA 8270D met method guidelines.**

#### EPA 8270D

#### **Continuing Calibration Verification-**

Calibration	Sequence	LabNumber	File ID	Date / Time
SE30038	S3H0125	S3H0125-CCV1	SV3016574.D	08/01/23 09:48
SE30038	S3H0218	S3H0218-CCV1	SV3016585.D	08/01/23 15:27

The continuing calibration verification recovered within method limits.

#### EPA 8270D

#### **Batch QC**

**Method Blank-** No reportable target compounds were detected in the method blank(s)

Batch	Sequence	Instrument	Blank	FileID	
SVOA	BG31686	S3H0125	BNA #3	BG31686-BLK1	SV3016575.D

#### **Laboratory Control Sample (LCS) or Standard Reference Material (SRM)-**

Were run as batch QC for this project. Please refer to the Quality Control Data attached to this report for bias information.

Calibration	Sequence	LabNumber	SampleName	File ID
SE30038	S3H0125	BG31686-BS1	LCS	SV3016576.D
SE30038	S3H0125	BG31686-BSD1	LCS Dup	SV3016577.D

## York Analytical Work Order Narrative

### EPA 8270D

**Dilutions:** No sample dilutions were required.

### EPA 8270D

#### Internal Standards / Surrogates

Internal Standards Issues: No issues were encountered.

Surrogate Issues: No issues were encountered.

#### Surrogate RT summary

Calibration	SampleName	LabNumber	Analyte	Rec %	RT	CalRT	RTDiff	RT Lim	RT Q
<b>SE30038</b>	Calibration Check	S3H0125-CCV1	SURR: Nitrobenzene-d5	<b>103</b>	<b>5.573</b>	<b>5.608</b>	<b>-0.0350</b>	<b>1.00</b>	
<b>SE30038</b>	Calibration Check	S3H0125-CCV1	SURR: 2-Fluorobiphenyl	<b>107</b>	<b>6.954</b>	<b>7.005875</b>	<b>-0.0519</b>	<b>1.00</b>	
<b>SE30038</b>	Calibration Check	S3H0125-CCV1	SURR: Terphenyl-d14	<b>109</b>	<b>12.993</b>	<b>13.08913</b>	<b>-0.0961</b>	<b>1.00</b>	
<b>SE30038</b>	Blank	BG31686-BLK1	SURR: Nitrobenzene-d5	<b>77.1</b>	<b>5.574</b>	<b>5.608</b>	<b>-0.0340</b>	<b>1.00</b>	
<b>SE30038</b>	Blank	BG31686-BLK1	SURR: 2-Fluorobiphenyl	<b>75.0</b>	<b>6.958</b>	<b>7.005875</b>	<b>-0.0479</b>	<b>1.00</b>	
<b>SE30038</b>	Blank	BG31686-BLK1	SURR: Terphenyl-d14	<b>86.9</b>	<b>12.994</b>	<b>13.08913</b>	<b>-0.0951</b>	<b>1.00</b>	
<b>SE30038</b>	LCS	BG31686-BS1	SURR: Nitrobenzene-d5	<b>63.7</b>	<b>5.573</b>	<b>5.608</b>	<b>-0.0350</b>	<b>1.00</b>	
<b>SE30038</b>	LCS	BG31686-BS1	SURR: 2-Fluorobiphenyl	<b>61.2</b>	<b>6.954</b>	<b>7.005875</b>	<b>-0.0519</b>	<b>1.00</b>	
<b>SE30038</b>	LCS	BG31686-BS1	SURR: Terphenyl-d14	<b>71.7</b>	<b>12.993</b>	<b>13.08913</b>	<b>-0.0961</b>	<b>1.00</b>	
<b>SE30038</b>	LCS Dup	BG31686-BSD1	SURR: Nitrobenzene-d5	<b>71.9</b>	<b>5.572</b>	<b>5.608</b>	<b>-0.0360</b>	<b>1.00</b>	
<b>SE30038</b>	LCS Dup	BG31686-BSD1	SURR: 2-Fluorobiphenyl	<b>67.1</b>	<b>6.954</b>	<b>7.005875</b>	<b>-0.0519</b>	<b>1.00</b>	
<b>SE30038</b>	LCS Dup	BG31686-BSD1	SURR: Terphenyl-d14	<b>78.9</b>	<b>12.992</b>	<b>13.08913</b>	<b>-0.0971</b>	<b>1.00</b>	
<b>SE30038</b>	Calibration Check	S3H0218-CCV1	SURR: Nitrobenzene-d5	<b>101</b>	<b>5.574</b>	<b>5.608</b>	<b>-0.0340</b>	<b>1.00</b>	
<b>SE30038</b>	Calibration Check	S3H0218-CCV1	SURR: 2-Fluorobiphenyl	<b>108</b>	<b>6.955</b>	<b>7.005875</b>	<b>-0.0509</b>	<b>1.00</b>	
<b>SE30038</b>	Calibration Check	S3H0218-CCV1	SURR: Terphenyl-d14	<b>110</b>	<b>12.997</b>	<b>13.08913</b>	<b>-0.0921</b>	<b>1.00</b>	
<b>SE30038</b>	MW-18	23G1414-01	SURR: Nitrobenzene-d5	<b>72.8</b>	<b>5.573</b>	<b>5.608</b>	<b>-0.0350</b>	<b>1.00</b>	
<b>SE30038</b>	MW-18	23G1414-01	SURR: 2-Fluorobiphenyl	<b>71.7</b>	<b>6.955</b>	<b>7.005875</b>	<b>-0.0509</b>	<b>1.00</b>	
<b>SE30038</b>	MW-18	23G1414-01	SURR: Terphenyl-d14	<b>80.8</b>	<b>12.993</b>	<b>13.08913</b>	<b>-0.0961</b>	<b>1.00</b>	

## York Analytical Work Order Narrative

### 4.0 Analysis Issues

#### EPA 8270D SIM                    Analysis

No problems were encountered with analysis of the samples, other than detailed below.

#### ***Initial Calibration : SG30027***

Samples and QC analyzed using this calibration / sequence.

Calibration	Batch	Sequence	SampleName	LabNumber	Instrument	File ID
<b>SG30027</b>	S3G1856	S3G1856	Secondary Cal Check	S3G1856-SCV1	BNA #5	SV5A3544.D

***Initial calibration for EPA 8270D SIM met method guidelines.***

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#### EPA 8270D SIM                    SIM Analysis

#### ***Continuing Calibration Verification-***

The continuing calibration verification recovered within method limits.

#### EPA 8270D SIM                    SIM Analysis

#### ***Batch QC***

**Method Blank-** No reportable target compounds were detected in the method blank(s)

#### ***Laboratory Control Sample (LCS) or Standard Reference Material (SRM)-***

Were run as batch QC for this project. Please refer to the Quality Control Data attached to this report for bias information.

#### EPA 8270D SIM                    SIM Analysis

**Dilutions:**    No sample dilutions were required.

## York Analytical Work Order Narrative

EPA 8270D SIM

SIM Analysis

### Internal Standards / Surrogates

Internal Standards Issues: No issues were encountered.

Surrogate RT summary

## York Analytical Work Order Narrative

### 4.0 Analysis Issues

#### CT DEP ETPH

No problems were encountered with analysis of the samples, other than detailed below.

#### **Initial Calibration : SF30011**

Samples and QC analyzed using this calibration / sequence.

Calibration	Batch	Sequence	SampleName	LabNumber	Instrument	File ID
SF30011	S3F0725	S3F0725	Calibration Check	S3F0725-CCV1	HP FID 3	G8006925.D
SF30011	S3G2807	S3G2807	Calibration Check	S3G2807-CCV1	HP FID 3	G8007430.D
SF30011	BG31572	S3G2807	Blank	BG31572-BLK1	HP FID 3	G8007431.D
SF30011	BG31572	S3G2807	LCS	BG31572-BS1	HP FID 3	G8007432.D
SF30011	BG31572	S3G2807	LCS Dup	BG31572-BSD1	HP FID 3	G8007433.D
SF30011	BG31572	S3G2807	MW-18	23G1414-01	HP FID 3	G8007442.D
SF30011	S3G2807	S3G2807	Calibration Check	S3G2807-CCV2	HP FID 3	G8007445.D

**Initial calibration for CT DEP ETPH exceeded method guidelines.**

Calibration	Intrument	Calibration Date	File ID
SF30011	HP FID 3	6/3/2023 12:19:26 PM	G8006916.D

The following QC and or client samples were affected:

#### CT DEP ETPH

#### **Continuing Calibration Verification-**

Calibration	Sequence	LabNumber	File ID	Date / Time
SF30011	S3F0725	S3F0725-CCV1	G8006925.D	06/03/23 20:11
SF30011	S3G2807	S3G2807-CCV1	G8007430.D	07/27/23 14:47
SF30011	S3G2807	S3G2807-CCV2	G8007445.D	07/28/23 00:35

The continuing calibration verification recovered within method limits.

## York Analytical Work Order Narrative

### CT DEP ETPH

#### Batch QC

**Method Blank-** No reportable target compounds were detected in the method blank(s)

	Batch	Sequence	Instrument	Blank	FileID
GC	BG31572	S3G2807	HP FID 3	BG31572-BLK1	G8007431.D

#### Laboratory Control Sample (LCS) or Standard Reference Material (SRM)-

Were run as batch QC for this project. Please refer to the Quality Control Data attached to this report for bias information.

Calibration	Sequence	LabNumber	SampleName	File ID
SF30011	S3G2807	BG31572-BS1	LCS	G8007432.D
SF30011	S3G2807	BG31572-BSD1	LCS Dup	G8007433.D

### CT DEP ETPH

**Dilutions:** No sample dilutions were required.

### CT DEP ETPH

#### Internal Standards / Surrogates

Surrogate Issues: No issues were encountered.

#### Surrogate RT summary

Calibration	SampleName	LabNumber	Analyte	Rec %	RT	CalRT	RTDiff	RT Lim	RT Q
SF30011	Calibration Check	S3F0725-CCV1	1-Chlorooctadecane	119	16.23	16.23	0.0000	1.00	
SF30011	Calibration Check	S3G2807-CCV1	1-Chlorooctadecane	136	16.15	16.23	-0.0800	1.00	
SF30011	Blank	BG31572-BLK1	1-Chlorooctadecane	74.3	16.13	16.23	-0.1000	1.00	
SF30011	LCS	BG31572-BS1	1-Chlorooctadecane	54.0		16.23	-16.2300	1.00	*
SF30011	LCS Dup	BG31572-BSD1	1-Chlorooctadecane	37.3		16.23	-16.2300	1.00	*
SF30011	MW-18	23G1414-01	1-Chlorooctadecane	53.1	16.15	16.23	-0.0800	1.00	
SF30011	Calibration Check	S3G2807-CCV2	1-Chlorooctadecane	106	16.16	16.23	-0.0700	1.00	

Cal\_Summary subreport

## York Analytical Work Order Narrative

### York Analytical Laboratories, Inc. Formulae Used for Sample Calculations

#### 1. Volatiles in Air-ppbv

C<sub>x</sub> (ppbv) = Compound concentration, ppbv (parts per billion by volume)

$$C_x = \frac{(A_x)(C_{is})(DF)}{(A_{is})(RRF)}$$

#### 2. Volatiles in Air-ug/m<sup>3</sup>

C<sub>x</sub> (ug/m<sup>3</sup>) = Compound concentration in ug/m<sup>3</sup>

$$C_x \text{ (ug/m}^3\text{)} = \frac{\text{(ppbv} \times \text{Molecular wt.)}}{(24.040)}$$

#### 3. Volatile Organics (water and soil), ug/L or ug/kg

Soils/Waters

Medium Level Soils

$$C_x = \frac{(A_x)(IS)(DF)}{(A_{is})(RRF)(V)(\% \text{ solids})}$$

$$C_x = \frac{(A_x)(IS)(VT)(1000)(DF)}{(A_{is})(RRF)(VA)(V)(\% \text{ solids})}$$

#### 4. Semi-Volatiles (waters and soils)

$$C_x = \frac{(A_x)(IS)(VE)(DF)}{(A_{is})(RRF)(\text{Volume injected, uL})(V)(\% \text{ solids})}$$

#### 5. Pesticides/PCB (waters and soils), DRO, CTETPH

$$C_x = \frac{(A_x)(VE)(DF)}{(CF)(\text{Volume injected, uL})(V)(\% \text{ solids})}$$

WHERE:

C<sub>x</sub> = concentration of analyte as ug/L or ug/kg

A<sub>x</sub> = Area of the characteristic ion for the compound to be measured, counts.

A<sub>is</sub> = Area of the characteristic ion for the specific internal standard, counts.

IS = Concentration of the internal standard spiking mixture, ng

RRF = Mean relative response factor from the initial calibration.

DF = Dilution factor calculated as described in section 2. If no dilution is performed, DF= 1

V = Volume for liquids in mL, weight for soils/solids in grams.

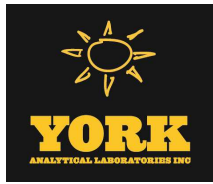
VA = volume of MeOH aliquot for medium level soils

VE = final volume of concentrated extract

VT = volume of MeOH for volatiles medium level soils

CF = calibration factor for external calibration used in GC pest/pcb

C<sub>is</sub> = Concentration of the internal standard spiking mixture, ppbv



## Analytical Batch Summary

**Batch ID:** BG31572                      **Preparation Method:** EPA 3510C                      **Prepared By:** SCB

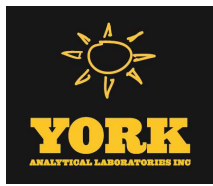
YORK Sample ID	Client Sample ID	Preparation Date
23G1414-01	MW-18	07/27/23
BG31572-BLK1	Blank	07/27/23
BG31572-BS1	LCS	07/27/23
BG31572-BSD1	LCS Dup	07/27/23

**Batch ID:** BG31643                      **Preparation Method:** EPA 5030B                      **Prepared By:** SMA

YORK Sample ID	Client Sample ID	Preparation Date
23G1414-01	MW-18	07/28/23
BG31643-BLK1	Blank	07/28/23
BG31643-BS1	LCS	07/28/23
BG31643-BSD1	LCS Dup	07/28/23

**Batch ID:** BG31686                      **Preparation Method:** EPA 3510C                      **Prepared By:** JG

YORK Sample ID	Client Sample ID	Preparation Date
23G1414-01	MW-18	07/29/23
BG31686-BLK1	Blank	07/29/23
BG31686-BS1	LCS	07/29/23
BG31686-BSD1	LCS Dup	07/29/23



**Volatile Organic Compounds by GC/MS - Quality Control Data**  
**York Analytical Laboratories, Inc. - Stratford**

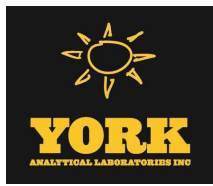
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BG31643 - EPA 5030B**

**Blank (BG31643-BLK1)**

Prepared & Analyzed: 07/28/2023

1,1,1,2-Tetrachloroethane	ND	0.500	ug/L								
1,1,1-Trichloroethane	ND	0.500	"								
1,1,2,2-Tetrachloroethane	ND	0.500	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.500	"								
1,1,2-Trichloroethane	ND	0.500	"								
1,1-Dichloroethane	ND	0.500	"								
1,1-Dichloroethylene	ND	0.500	"								
1,1-Dichloropropylene	ND	0.500	"								
1,2,3-Trichlorobenzene	ND	0.500	"								
1,2,3-Trichloropropane	ND	0.500	"								
1,2,4-Trichlorobenzene	ND	0.500	"								
1,2,4-Trimethylbenzene	ND	0.500	"								
1,2-Dibromo-3-chloropropane	ND	0.500	"								
1,2-Dibromoethane	ND	0.500	"								
1,2-Dichlorobenzene	ND	0.500	"								
1,2-Dichloroethane	ND	0.500	"								
1,2-Dichloropropane	ND	0.500	"								
1,3,5-Trimethylbenzene	ND	0.500	"								
1,3-Dichlorobenzene	ND	0.500	"								
1,3-Dichloropropane	ND	0.500	"								
1,4-Dichlorobenzene	ND	0.500	"								
2,2-Dichloropropane	ND	0.500	"								
2-Butanone	ND	0.500	"								
2-Chlorotoluene	ND	0.500	"								
2-Hexanone	ND	0.500	"								
4-Chlorotoluene	ND	0.500	"								
4-Methyl-2-pentanone	ND	0.500	"								
Acetone	ND	2.00	"								
Acrylonitrile	ND	0.500	"								
Benzene	ND	0.500	"								
Bromobenzene	ND	0.500	"								
Bromochloromethane	ND	0.500	"								
Bromodichloromethane	ND	0.500	"								
Bromoform	ND	0.500	"								
Bromomethane	ND	0.500	"								
Carbon disulfide	ND	0.500	"								
Carbon tetrachloride	ND	0.500	"								
Chlorobenzene	ND	0.500	"								
Chloroethane	ND	0.500	"								
Chloroform	ND	0.500	"								
Chloromethane	ND	0.500	"								
cis-1,2-Dichloroethylene	ND	0.500	"								
cis-1,3-Dichloropropylene	ND	0.500	"								
Dibromochloromethane	ND	0.500	"								
Dibromomethane	ND	0.500	"								
Dichlorodifluoromethane	ND	0.500	"								
Ethyl Benzene	ND	0.500	"								
Hexachlorobutadiene	ND	0.500	"								
Isopropylbenzene	ND	0.500	"								
Methyl Methacrylate	ND	0.500	"								



**Volatile Organic Compounds by GC/MS - Quality Control Data**  
**York Analytical Laboratories, Inc. - Stratford**

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BG31643 - EPA 5030B**

**Blank (BG31643-BLK1)**

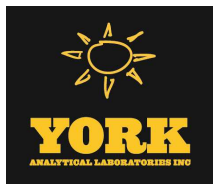
Prepared & Analyzed: 07/28/2023

Methyl tert-butyl ether (MTBE)	ND	0.500	ug/L								
Methylene chloride	ND	2.00	"								
Naphthalene	ND	2.00	"								
n-Butylbenzene	ND	0.500	"								
n-Propylbenzene	ND	0.500	"								
o-Xylene	ND	0.500	"								
p- & m- Xylenes	ND	1.00	"								
p-Isopropyltoluene	ND	0.500	"								
sec-Butylbenzene	ND	0.500	"								
Styrene	ND	0.500	"								
tert-Butylbenzene	ND	0.500	"								
Tetrachloroethylene	ND	0.500	"								
Tetrahydrofuran	ND	4.00	"								
Toluene	ND	0.500	"								
trans-1,2-Dichloroethylene	ND	0.500	"								
trans-1,3-Dichloropropylene	ND	0.500	"								
trans-1,4-dichloro-2-butene	ND	0.500	"								
Trichloroethylene	ND	0.500	"								
Trichlorofluoromethane	ND	0.500	"								
Vinyl Chloride	ND	0.500	"								
<i>Surrogate: SURR: 1,2-Dichloroethane-d4</i>	<i>10.1</i>		<i>"</i>	<i>10.0</i>		<i>101</i>	<i>70-130</i>				
<i>Surrogate: SURR: Toluene-d8</i>	<i>9.82</i>		<i>"</i>	<i>10.0</i>		<i>98.2</i>	<i>70-130</i>				
<i>Surrogate: SURR: p-Bromofluorobenzene</i>	<i>10.3</i>		<i>"</i>	<i>10.0</i>		<i>103</i>	<i>70-130</i>				

**LCS (BG31643-BS1)**

Prepared & Analyzed: 07/28/2023

1,1,1,2-Tetrachloroethane	8.93		ug/L	10.0		89.3	70-130				
1,1,1-Trichloroethane	9.70		"	10.0		97.0	70-130				
1,1,2,2-Tetrachloroethane	8.91		"	10.0		89.1	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.4		"	10.0		104	70-130				
1,1,2-Trichloroethane	8.54		"	10.0		85.4	70-130				
1,1-Dichloroethane	8.36		"	10.0		83.6	70-130				
1,1-Dichloroethylene	9.16		"	10.0		91.6	70-130				
1,1-Dichloropropylene	8.84		"	10.0		88.4	70-130				
1,2,3-Trichlorobenzene	8.33		"	10.0		83.3	70-130				
1,2,3-Trichloropropane	8.51		"	10.0		85.1	70-130				
1,2,4-Trichlorobenzene	8.61		"	10.0		86.1	70-130				
1,2,4-Trimethylbenzene	8.60		"	10.0		86.0	70-130				
1,2-Dibromo-3-chloropropane	8.36		"	10.0		83.6	70-130				
1,2-Dibromoethane	8.91		"	10.0		89.1	70-130				
1,2-Dichlorobenzene	8.98		"	10.0		89.8	70-130				
1,2-Dichloroethane	9.27		"	10.0		92.7	70-130				
1,2-Dichloropropane	8.36		"	10.0		83.6	70-130				
1,3,5-Trimethylbenzene	8.45		"	10.0		84.5	70-130				
1,3-Dichlorobenzene	8.86		"	10.0		88.6	70-130				
1,3-Dichloropropane	8.49		"	10.0		84.9	70-130				
1,4-Dichlorobenzene	8.86		"	10.0		88.6	70-130				
2,2-Dichloropropane	8.71		"	10.0		87.1	70-130				
2-Butanone	8.18		"	10.0		81.8	70-130				
2-Chlorotoluene	8.43		"	10.0		84.3	70-130				
2-Hexanone	6.27		"	10.0		62.7	70-130		Low Bias		
4-Chlorotoluene	8.47		"	10.0		84.7	70-130				



**Volatile Organic Compounds by GC/MS - Quality Control Data**  
**York Analytical Laboratories, Inc. - Stratford**

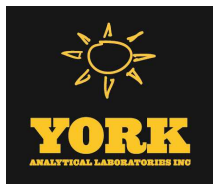
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BG31643 - EPA 5030B**

**LCS (BG31643-BS1)**

Prepared & Analyzed: 07/28/2023

4-Methyl-2-pentanone	6.03		ug/L	10.0		60.3	70-130	Low Bias			
Acetone	4.18		"	10.0		41.8	70-130	Low Bias			
Acrylonitrile	9.26		"	10.0		92.6	70-130				
Benzene	9.10		"	10.0		91.0	70-130				
Bromobenzene	8.18		"	10.0		81.8	70-130				
Bromochloromethane	8.76		"	10.0		87.6	70-130				
Bromodichloromethane	8.45		"	10.0		84.5	70-130				
Bromoform	8.75		"	10.0		87.5	70-130				
Bromomethane	6.27		"	10.0		62.7	70-130	Low Bias			
Carbon disulfide	9.14		"	10.0		91.4	70-130				
Carbon tetrachloride	9.72		"	10.0		97.2	70-130				
Chlorobenzene	9.35		"	10.0		93.5	70-130				
Chloroethane	9.20		"	10.0		92.0	70-130				
Chloroform	9.07		"	10.0		90.7	70-130				
Chloromethane	8.58		"	10.0		85.8	70-130				
cis-1,2-Dichloroethylene	8.67		"	10.0		86.7	70-130				
cis-1,3-Dichloropropylene	8.46		"	10.0		84.6	70-130				
Dibromochloromethane	8.72		"	10.0		87.2	70-130				
Dibromomethane	8.72		"	10.0		87.2	70-130				
Dichlorodifluoromethane	10.7		"	10.0		107	70-130				
Ethyl Benzene	8.62		"	10.0		86.2	70-130				
Hexachlorobutadiene	8.30		"	10.0		83.0	70-130				
Isopropylbenzene	8.66		"	10.0		86.6	70-130				
Methyl Methacrylate	8.00		"	10.0		80.0	70-130				
Methyl tert-butyl ether (MTBE)	8.68		"	10.0		86.8	70-130				
Methylene chloride	8.56		"	10.0		85.6	70-130				
Naphthalene	8.23		"	10.0		82.3	70-130				
n-Butylbenzene	8.33		"	10.0		83.3	70-130				
n-Propylbenzene	8.40		"	10.0		84.0	70-130				
o-Xylene	8.67		"	10.0		86.7	70-130				
p- & m- Xylenes	17.3		"	20.0		86.6	70-130				
p-Isopropyltoluene	8.62		"	10.0		86.2	70-130				
sec-Butylbenzene	8.67		"	10.0		86.7	70-130				
Styrene	8.88		"	10.0		88.8	70-130				
tert-Butylbenzene	8.59		"	10.0		85.9	70-130				
Tetrachloroethylene	4.96		"	10.0		49.6	70-130	Low Bias			
Tetrahydrofuran	7.40		"	10.0		74.0	70-130				
Toluene	8.50		"	10.0		85.0	70-130				
trans-1,2-Dichloroethylene	8.86		"	10.0		88.6	70-130				
trans-1,3-Dichloropropylene	8.10		"	10.0		81.0	70-130				
trans-1,4-dichloro-2-butene	8.90		"	10.0		89.0	70-130				
Trichloroethylene	8.32		"	10.0		83.2	70-130				
Trichlorofluoromethane	10.8		"	10.0		108	70-130				
Vinyl Chloride	10.7		"	10.0		107	70-130				
Surrogate: SURR: 1,2-Dichloroethane-d4	9.92		"	10.0		99.2	70-130				
Surrogate: SURR: Toluene-d8	9.54		"	10.0		95.4	70-130				
Surrogate: SURR: p-Bromofluorobenzene	9.55		"	10.0		95.5	70-130				



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
<b>Batch BG31643 - EPA 5030B</b>											
<b>LCS Dup (BG31643-BSD1)</b>											
										Prepared & Analyzed: 07/28/2023	
1,1,1,2-Tetrachloroethane	8.74		ug/L	10.0		87.4	70-130		2.15	30	
1,1,1-Trichloroethane	9.38		"	10.0		93.8	70-130		3.35	30	
1,1,2,2-Tetrachloroethane	8.95		"	10.0		89.5	70-130		0.448	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.1		"	10.0		101	70-130		3.80	30	
1,1,2-Trichloroethane	8.48		"	10.0		84.8	70-130		0.705	30	
1,1-Dichloroethane	8.33		"	10.0		83.3	70-130		0.359	30	
1,1-Dichloroethylene	8.79		"	10.0		87.9	70-130		4.12	30	
1,1-Dichloropropylene	8.55		"	10.0		85.5	70-130		3.34	30	
1,2,3-Trichlorobenzene	8.09		"	10.0		80.9	70-130		2.92	30	
1,2,3-Trichloropropane	8.48		"	10.0		84.8	70-130		0.353	30	
1,2,4-Trichlorobenzene	8.55		"	10.0		85.5	70-130		0.699	30	
1,2,4-Trimethylbenzene	8.33		"	10.0		83.3	70-130		3.19	30	
1,2-Dibromo-3-chloropropane	7.57		"	10.0		75.7	70-130		9.92	30	
1,2-Dibromoethane	8.72		"	10.0		87.2	70-130		2.16	30	
1,2-Dichlorobenzene	8.77		"	10.0		87.7	70-130		2.37	30	
1,2-Dichloroethane	9.25		"	10.0		92.5	70-130		0.216	30	
1,2-Dichloropropane	7.89		"	10.0		78.9	70-130		5.78	30	
1,3,5-Trimethylbenzene	8.11		"	10.0		81.1	70-130		4.11	30	
1,3-Dichlorobenzene	8.54		"	10.0		85.4	70-130		3.68	30	
1,3-Dichloropropane	8.22		"	10.0		82.2	70-130		3.23	30	
1,4-Dichlorobenzene	8.50		"	10.0		85.0	70-130		4.15	30	
2,2-Dichloropropane	8.60		"	10.0		86.0	70-130		1.27	30	
2-Butanone	6.96		"	10.0		69.6	70-130	Low Bias	16.1	30	
2-Chlorotoluene	8.21		"	10.0		82.1	70-130		2.64	30	
2-Hexanone	6.48		"	10.0		64.8	70-130	Low Bias	3.29	30	
4-Chlorotoluene	8.15		"	10.0		81.5	70-130		3.85	30	
4-Methyl-2-pentanone	6.04		"	10.0		60.4	70-130	Low Bias	0.166	30	
Acetone	4.56		"	10.0		45.6	70-130	Low Bias	8.70	30	
Acrylonitrile	7.72		"	10.0		77.2	70-130		18.1	30	
Benzene	8.93		"	10.0		89.3	70-130		1.89	30	
Bromobenzene	8.00		"	10.0		80.0	70-130		2.22	30	
Bromochloromethane	8.86		"	10.0		88.6	70-130		1.14	30	
Bromodichloromethane	8.37		"	10.0		83.7	70-130		0.951	30	
Bromoform	8.73		"	10.0		87.3	70-130		0.229	30	
Bromomethane	6.34		"	10.0		63.4	70-130	Low Bias	1.11	30	
Carbon disulfide	8.81		"	10.0		88.1	70-130		3.68	30	
Carbon tetrachloride	9.47		"	10.0		94.7	70-130		2.61	30	
Chlorobenzene	9.19		"	10.0		91.9	70-130		1.73	30	
Chloroethane	9.04		"	10.0		90.4	70-130		1.75	30	
Chloroform	9.30		"	10.0		93.0	70-130		2.50	30	
Chloromethane	8.41		"	10.0		84.1	70-130		2.00	30	
cis-1,2-Dichloroethylene	8.64		"	10.0		86.4	70-130		0.347	30	
cis-1,3-Dichloropropylene	8.13		"	10.0		81.3	70-130		3.98	30	
Dibromochloromethane	8.55		"	10.0		85.5	70-130		1.97	30	
Dibromomethane	8.50		"	10.0		85.0	70-130		2.56	30	
Dichlorodifluoromethane	10.3		"	10.0		103	70-130		3.43	30	
Ethyl Benzene	8.24		"	10.0		82.4	70-130		4.51	30	
Hexachlorobutadiene	7.79		"	10.0		77.9	70-130		6.34	30	
Isopropylbenzene	8.33		"	10.0		83.3	70-130		3.88	30	
Methyl Methacrylate	7.55		"	10.0		75.5	70-130		5.79	30	
Methyl tert-butyl ether (MTBE)	8.93		"	10.0		89.3	70-130		2.84	30	



**Volatile Organic Compounds by GC/MS - Quality Control Data**  
**York Analytical Laboratories, Inc. - Stratford**

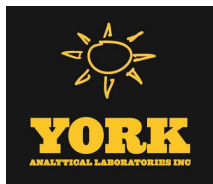
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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**Batch BG31643 - EPA 5030B**

**LCS Dup (BG31643-BSD1)**

Prepared & Analyzed: 07/28/2023

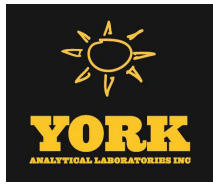
Methylene chloride	8.59		ug/L	10.0		85.9	70-130		0.350	30	
Naphthalene	8.34		"	10.0		83.4	70-130		1.33	30	
n-Butylbenzene	7.99		"	10.0		79.9	70-130		4.17	30	
n-Propylbenzene	8.13		"	10.0		81.3	70-130		3.27	30	
o-Xylene	8.27		"	10.0		82.7	70-130		4.72	30	
p- & m- Xylenes	16.5		"	20.0		82.4	70-130		5.03	30	
p-Isopropyltoluene	8.32		"	10.0		83.2	70-130		3.54	30	
sec-Butylbenzene	8.30		"	10.0		83.0	70-130		4.36	30	
Styrene	8.51		"	10.0		85.1	70-130		4.26	30	
tert-Butylbenzene	8.38		"	10.0		83.8	70-130		2.47	30	
Tetrachloroethylene	4.67		"	10.0		46.7	70-130	Low Bias	6.02	30	
Tetrahydrofuran	8.02		"	10.0		80.2	70-130		8.04	30	
Toluene	8.06		"	10.0		80.6	70-130		5.31	30	
trans-1,2-Dichloroethylene	8.68		"	10.0		86.8	70-130		2.05	30	
trans-1,3-Dichloropropylene	8.01		"	10.0		80.1	70-130		1.12	30	
trans-1,4-dichloro-2-butene	8.70		"	10.0		87.0	70-130		2.27	30	
Trichloroethylene	7.95		"	10.0		79.5	70-130		4.55	30	
Trichlorofluoromethane	10.6		"	10.0		106	70-130		2.34	30	
Vinyl Chloride	10.8		"	10.0		108	70-130		1.21	30	
<i>Surrogate: SURR: 1,2-Dichloroethane-d4</i>	<i>10.2</i>		<i>"</i>	<i>10.0</i>		<i>102</i>	<i>70-130</i>				
<i>Surrogate: SURR: Toluene-d8</i>	<i>9.53</i>		<i>"</i>	<i>10.0</i>		<i>95.3</i>	<i>70-130</i>				
<i>Surrogate: SURR: p-Bromofluorobenzene</i>	<i>9.62</i>		<i>"</i>	<i>10.0</i>		<i>96.2</i>	<i>70-130</i>				



Semivolatile Organic Compounds by GC/MS - Quality Control Data

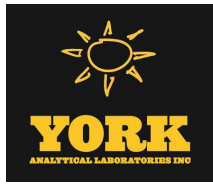
York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
<b>Batch BG31686 - EPA 3510C</b>											
<b>Blank (BG31686-BLK1)</b>										Prepared: 07/29/2023 Analyzed: 08/01/2023	
2-Methylnaphthalene	ND	5.00	ug/L								
Surrogate: SURR: Nitrobenzene-d5	19.3		"	25.0		77.1	30-130				
Surrogate: SURR: 2-Fluorobiphenyl	18.7		"	25.0		75.0	30-130				
Surrogate: SURR: Terphenyl-d14	21.7		"	25.0		86.9	30-130				
<b>LCS (BG31686-BS1)</b>										Prepared: 07/29/2023 Analyzed: 08/01/2023	
2-Methylnaphthalene	13.1	5.00	ug/L	25.0		52.4	40-140				
Surrogate: SURR: Nitrobenzene-d5	15.9		"	25.0		63.7	30-130				
Surrogate: SURR: 2-Fluorobiphenyl	15.3		"	25.0		61.2	30-130				
Surrogate: SURR: Terphenyl-d14	17.9		"	25.0		71.7	30-130				
<b>LCS Dup (BG31686-BSD1)</b>										Prepared: 07/29/2023 Analyzed: 08/01/2023	
2-Methylnaphthalene	14.5	5.00	ug/L	25.0		58.0	40-140		10.3	20	
Surrogate: SURR: Nitrobenzene-d5	18.0		"	25.0		71.9	30-130				
Surrogate: SURR: 2-Fluorobiphenyl	16.8		"	25.0		67.1	30-130				
Surrogate: SURR: Terphenyl-d14	19.7		"	25.0		78.9	30-130				



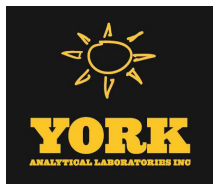
**Gas Chromatography/Flame Ionization Detector - Quality Control Data**  
**York Analytical Laboratories, Inc. - Stratford**

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
<b>Batch BG31572 - EPA 3510C</b>											
<b>Blank (BG31572-BLK1)</b>										Prepared & Analyzed: 07/27/2023	
ETPH (Extractable Total Petroleum Hydrocarbons)	ND	0.150	mg/L								
Surrogate: 1-Chlorooctadecane	0.0743		"	0.100		74.3	30-140				
<b>LCS (BG31572-BS1)</b>										Prepared & Analyzed: 07/27/2023	
ETPH (Extractable Total Petroleum Hydrocarbons)	0.621	0.150	mg/L	0.750		82.9	60-120				
Surrogate: 1-Chlorooctadecane	0.0540		"	0.100		54.0	30-140				
<b>LCS Dup (BG31572-BSD1)</b>										Prepared & Analyzed: 07/27/2023	
ETPH (Extractable Total Petroleum Hydrocarbons)	0.614	0.150	mg/L	0.750		81.9	60-120		1.20	30	
Surrogate: 1-Chlorooctadecane	0.0373		"	0.100		37.3	30-140				



### Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
23G1414-01	MW-18	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C



## Sample and Data Qualifiers Relating to This Work Order

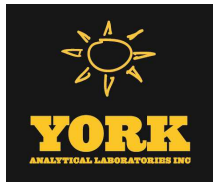
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
ICVE20	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 20% of expected value).
ICVE	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 30% of expected value).
CCVE	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
CAL-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%)

### Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.



2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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