

# **REMEDIAL INVESTIGATIVE REPORT**

KoscoHeritage – South Fallsburg Terminal  
74 Griff Court  
South Fallsburg, Sullivan County, New York



**NYSDEC PBS NO. 3-123226**  
**NYSDEC SPILL NO. 19-00538**

December 23, 2019

**DT CONSULTING SERVICES, INC.**

1291 Old Post Road  
Ulster Park, New York 12487  
(845) 658-3484 (phone)  
dtconsulting@hvc.rr.com

December 23, 2019

Mr. John Ringel  
LL Fuel Storage, LLC  
Post Office Box 797  
Lake Katrine, New York 12449

**RE: REMEDIAL INVESTIGATIVE REPORT**  
KoscoHeritage – South Fallsburg Terminal  
74 Griff Court  
South Fallsburg, Sullivan County, New York

**NYSDEC PBS NO. 3-123226/NYSDEC SPILL NO. 19-00538**

Dear Mr. Ringel:

Pursuant to your request, DT Consulting Services, Inc. (DTCS) is please to present the following Subsurface Investigative Work Plan for your approval. As required, a copy of this report will be forwarded to the New York State Department of Environmental Conservation (NYSDEC) for their review and comment. The necessity for additional work is at the discretion of the NYSDEC.

If you should have any questions or require additional information please feel free to contact me at (845) 658-3484. DTCS thanks you for the opportunity to work with you on this project.

Sincerely,  
**DT CONSULTING SERVICES, INC.**

*Deborah J. Thompson*  
Deborah J. Thompson  
Senior Geologist/Project Manager

Cc: NYSDEC Region III

**DT CONSULTING SERVICES, INC.**

**REMEDIAL INVESTIGATIVE REPORT**

**Pertaining to:**

KoscoHeritage – South Fallsburg Terminal  
74 Griff Court  
South Fallsburg, Sullivan County, New York

**Prepared for:**

Mr. John Ringel  
LL Fuel Storage, LLC  
Post Office Box 797  
Lake Katrine, New York 12449

**Prepared by:**

Ms. Deborah J. Thompson  
Senior Geologist/Project Manager  
**DT CONSULTING SERVICES, INC.**  
1291 Old Post Road  
Ulster Park, New York 12487

**Date:** December 23, 2019

**TABLE OF CONTENTS**

**1.0 INTRODUCTION/SITE INFORMATION .....1-2**  
    **1.1 SENSITIVE RECEPTORS.....2**  
**2.0 SITE BACKGROUND/PREVIOUS ENVIRONMENTAL REPORTING .....2**  
**3.0 REMEDIAL INVESTIGATIVE ACTIVITIES.....3-7**  
    **3.1 SUBSURFACE INVESTIGATIVE PROCEDURES.....3-4**  
    **3.2 SUBSURFACE SOIL CHARACTERIZATION.....4-5**  
    **3.3 GROUNDWATER CHARACTERIZATION .....5**  
    **3.4 SUBSURFACE SAMPLING AND LABORATORY ANALYSIS.....6-7**  
**4.0 FINDINGS .....7-8**  
    **4.1 SUBSURFACE SOIL QUALITY .....7**  
    **4.2 GROUNDWATER QUALITY .....8**  
**5.0 CONCLUSTIONS .....8-9**  
**6.0 RECOMMENDATIONS.....9**  
**7.0 LIMITATIONS.....9**

**FIGURES**

**SITE LOCATION PLAN .....1**  
**SITE (BASE) PLAN .....2**  
**PHOTO DOCUMENTATION.....3**

**TABLES**

**SOIL QUALITY COMPARISON CHART.....1**  
**GROUNDWATER QUALITY COMPARISON CHART.....1**

**ATTACHMENTS**

**SOIL BORING LOGS..... A**  
**SOIL/GROUNDWATER ANALYTICAL PACKAGE ..... B**

**1.0 INTRODUCTION/ SITE INFORMATION**

DT Consulting Services, Inc. (DTCS) has been authorized by LL Fuel Storage, LLC (property owner) to generate a Remedial Investigative Report (RIR) for the commercial property known as the KoscoHeritage – South Fallsburg Terminal located at 74 Griff Court, South Fallsburg, Sullivan County, New York referenced heretofore as the Site or Subject Property. Note that since the Site is located at the intersection of Griff Court and Laurel Avenue, the Subject Facility has also been referenced with a Site address of 25 Laurel Avenue. Attached as Figures 1 and 2 are Site Location and Site (base) Maps, respectively for your review.

The irregularly shaped +/- 1.76-acre Site includes a total of two tax parcels and is currently utilized as an unmanned, petroleum bulk storage (PBS) terminal. The Site is improved with an approximate 3,200-ft<sup>2</sup> unoccupied office and dry goods storage building along with ten aboveground storage tanks (ASTs), a fuel truck loading rack and an oil-water separator utilized to treat storm water run-off within the secondary containment area surrounding the ASTs prior to discharge. Note that the facility does maintain a Spill Prevention Control and Countermeasure (SPCC) Plan. Under the New York State Department of Environmental Conservation (NYSDEC) PBS Program, facilities with a combined petroleum storage capacity of greater than eleven hundred gallons or which have any underground storage tanks (USTs) with capacities greater than 110-gallons or which have a stationary waste oil tank are required to comply with registration, handling, storage, and record keeping requirements established in 6 NYCRR Part 613. Review of a NYSDEC PBS Registration Certificate revealed that the KoscoHeritage facility is registered under PBS No. 3-123226.

Stone base driveways and operational areas are found along the north, east and western sides of the main Site structure. The Subject Property is situated within a mixed use setting and is accessed from Laurel Avenue located east of the Subject Property. In Site is generally level and at grade with the adjacent roadway.

## **1.1 Sensitive Receptors**

There are no wetlands or surface water bodies on-Site. The nearest water body in relation to the Site is the Sheldrake Stream, located approximately 300-ft. west of the Site, which flows southward to discharge into Pleasant Lake. Based upon available documentation, as the Site is unoccupied, there are no private wells or septic systems utilized at the Subject facility.

## **2.0 SITE BACKGROUND/PREVIOUS ENVIRONMENTAL REPORTING**

On April 16, 2019 a spill was reported to the NYSDEC based upon the findings of a Limited Phase II Environmental Site Assessment (ESA) performed by Continental Placer, Inc. (CPI) of Albany, New York. As a result of this notification, Spill Number 19-00538 has been assigned to the Site by the Department. The ESA included the advancement of four soil borings to a depth of approximately 15 – 20 feet below grade surface (bgs). In total, four soil samples and one groundwater sample was submitted for laboratory analysis by CPI. Results indicated low level volatile and semi-volatile organic compounds (VOCs/SVOCs) within three of the four monitoring locations; although only one soil boring location (SB-3) displayed VOCs above Soil Clean-up Objectives or SCOs as defined in NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010.

DTCS was subsequently retained by LL Fuel Storage, LLC to generate a Subsurface Investigative Work Plan to delineate the extent of petroleum impacts on-Site as per the request of the Department. Upon approval of the plan, DTCS proceeded in executing the study as described in the Subsurface Investigative Work Plan, DTCS, July 19, 2019.

### 3.0 REMEDIAL INVESTIGATION ACTIVITIES

The purpose of this investigation is to further delineate the extent of subsurface impacts identified during a recent Limited Phase II ESA performed on the Subject Facility. The investigation was concentrated in locations surrounding the AST operational areas, the historical soil boring which displayed petroleum impacts, and select background locations so as to quantify subsurface conditions within the area(s) of study. To complete this task, DTCS's Scope of Work included:

- Contacting Dig Safely New York 811 (UFPO) to obtain subsurface utility mark-outs prior to performing the field sampling investigation;
- Execution of additional soil borings to collect and characterize subsurface materials;
- Provide quantitative data on targeted VOCs and SVOCs if detected within soil/groundwater matrices at the facility; and
- Prepare a RIR summarizing the findings of the field investigation and/or to address any identified subsurface contamination.

The identified eight soil boring (SB-1 - SB-6) and one groundwater (SB-1 GW) monitoring locations documented for the Site can be reviewed in Figure 2, attached. Note that two locations, denoted as SB-4R and SB-5R were terminated at 1.5-ft. below grade due to resistance encountered. Said monitoring points were abandoned and not sampled on account of the shallow depth of the borehole.

### **3.1 Subsurface Investigative Procedures**

DTCS mobilized to the Site with Core Down Drilling (drilling services contractor) of Pawling, New York on September 13, 2019 to perform the subsurface investigation. Employing a Geoprobe trac-mounted drill rig, soil samples were collected from eight borehole locations continuously from grade to a maximum depth of twelve feet below grade surface or bgs (see Figure 2 for sampling locations). Soil borings were shallow in nature due to the detection of bedrock and the observation of groundwater at approximately six - seven feet bgs. Each sample was obtained by advancing a forty-eight inch long, two inch outer diameter, stainless hollow spoon sampler equipped with a disposable acetate liner into undisturbed soils. To prevent the potential for cross-contamination, all sampling equipment was dedicated or decontaminated between each soil boring location.

An on-Site DTCS Geologist performed screening and classification immediately following collection of subsurface materials. The screening was conducted using a field calibrated MiniRae Photoionization Detector or PID. As most petroleum products contain VOCs, PID screening can indicate the presence of volatile organics in a soil sample. Additionally, soil samples were screened by visual and olfactory means for staining and/or unusual odors.

### **3.2 Subsurface Soil Characterization**

As detected during this investigation, the lithology of overburden materials encountered at the facility can be characterized as mixed fill, underlain by silty sand and till. A review of available geologic information from the New York State Geological Survey indicates that the Subject Property is underlain by sand and gravel alluvium, which are river bed deposits from the Neversink River. Bedrock below the overburden is mapped as shales and sandstones of the Upper

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Devonian Walton Formation. Groundwater flow in overburden and bedrock is expected to generally follow with surface topography (southwestward).

While performing this field survey, all soil cores were screened with a PID for VOCs upon removal from the subsurface. This screening was performed by placing the selected soil sample in a Ziploc® style freezer bag, sealing the bag, and after a short pause, yielding stabilized readings with a PID calibrated to 100 parts-per-million (ppm) isobutylene standard. The headspace screening yielded the positive responses of 10 – 3,100 ppm within each soil core on the day of the survey. Refer to Soil Boring Logs in Attachment A for details of subsurface materials encountered and associated field screening recordings as they relate to each soil core. Saturated soils (typically an indicator of groundwater) were documented at approximately six - seven feet bgs across the Site.

**3.3 Groundwater Characterization**

To provide data on the local aquifer, one of the soil borings (namely Soil Boring SB-1) was converted into temporary groundwater monitoring well. The well was constructed of ten feet of one-inch 0.10-slot well screen and five feet of solid riser casing. Prior to groundwater sampling, fluid levels in the monitoring well was gauged using a sonic interface probe to determine the depth of free phase product (DTP) if any, depth to water (DTW) and depth to bottom (DTB) of each well. These measurements were recorded in a field log along with details of the sampling procedures. A summary of collected monitoring data is as follows:

MW ID	Depth To Product (ft.)	Depth To Water (ft.)	Depth To Bottom (ft.)	Color	Appearance	Odor	Sheen
SB-1 GW	--	9.61	12.00	Brown	Cloudy	Yes	Yes

### 3.4 Subsurface Sampling and Laboratory Analysis

During investigative procedures, soil samples were collected from approximately one foot above through one foot below the detected groundwater table or from the area of obvious impacts as recorded by field analysis. Note that soil collection depths within each borehole are documented in Attachment A. Groundwater samples were also obtained to provide a more comprehensive analysis of subsurface conditions from with Soil Boring SB-1. Said boring was chosen for well conversion due to the obvious soil impacts encountered during this investigation. All subsurface materials submitted for laboratory testing were identified as follows:

**York Laboratory Number: 19I0619-01 – 19I0619-07**

**Sample No. 001** = Soil Boring SB-1

**Sample No. 002** = Soil Boring SB-1 GW

**Sample No. 003** = Soil Boring SB-2

**Sample No. 004** = Soil Boring SB-3

**Sample No. 005** = Soil Boring SB-4

**Sample No. 006** = Soil Boring SB-5

**Sample No. 007** = Soil Boring SB-6

All samples collected during the investigation were packed on ice and prepared for transport to York Analytical Laboratories, Inc. of Stratford, Connecticut (York) upon collection and were carried under standard chain of custody protocol.

### **Chemical Analysis**

Chemical analytical work presented in this RIR has been performed in the following manner:

<b>Factor</b>	<b>Description</b>
Chemical Analytical Methods	<p>NYSDEC CP-51 Parameters</p> <p>Soil analytical methods:</p> <ul style="list-style-type: none"> <li>• VOCs by EPA Method 8260 (rev. 2006);</li> <li>• SVOCs by EPA Method 8270 B/N (rev. 2007);</li> </ul> <p>Groundwater analytical methods:</p> <ul style="list-style-type: none"> <li>• VOCs by EPA Method 8260 (rev. 2006);</li> <li>• SVOCs by EPA Method 8270 B/N (rev. 2007).</li> </ul>

The complete laboratory package may be found in Attachment B for your review.

**4.0 FINDINGS**

Based upon the field and laboratory results of this investigation, DTCS presents the following findings concerning subsurface soil and groundwater quality:

**4.1 Subsurface Soil Quality**

To provide data on current subsurface conditions, a total of eight soil borings were advanced on the 74 Griff Court, South Fallsburg, New York property. Upon review of analytical testing, DTCS concludes that most all soil boring locations (with the exception of Soil Boring SB-6) were returned with VOC concentrations above NYSDEC CP-51 SCOs. The remaining testing parameters, namely the SVOCs, were recorded as either non-detect or with contaminant concentrations below state SCOs. Attached as Table 1 is a soil quality chart of laboratory documented compounds in comparison to their respective standards as defined in NYSDEC CP-51 Soil Cleanup Guidance, October, 21, 2010.

## 4.2 Groundwater Quality

Analysis of the temporary Site well installed during this investigation revealed concentrations of laboratory detectable dissolved phase VOCs and SVOCs. When compared to guidance, numerous VOCs were found to exceed their respective regulatory standards, while the reported SVOCs fell below standards. Attached as Table 1 is a chart of Site temporary monitoring well analytical reporting in comparison to the NYSDEC groundwater quality guidance values as described in Technical & Operations Guidance Series (TOGS) 1.1.1, June 1998.

## 5.0 CONCLUSIONS

The South Fallsburg terminal has eight 20,000-gallon aboveground storage tanks (#2 fuel oil, diesel and kerosene) and two 275-gallon ASTs (#2 fuel oil and kerosene) in a lined concrete secondary containment, a fuel truck loading rack, an unoccupied former office and storage building, a small wooden storage shed, an oil-water separator, and a concrete pad between the building and the fuel truck loading rack. The building is in the southeastern corner of the parcel next to a neighboring lumber yard. The AST and the truck loading rack are in the western portion of the parcel. An oil-water separator is west of the ASTs. While conducting the Limited Phase II ESA, CPI documented gasoline-impacted soil and groundwater. CPI also reported that when told of the presence of gasoline-impacted soil and groundwater, Site representatives indicated that there had been a fire at this facility many years ago involving a gasoline tank. It was so long ago; details could not be recollected.

After completing the review of all available Site data, DTCS has documented that the Subject Facility has been utilized for petroleum bulk storage since the late 1990s. The use of the Site for such activities has been identified as RECs during Phase I ESA reporting. Based upon the recent investigations conducted on-Site, there is evidence of a release of petroleum into the subsurface environment. The

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release has impacted shallow subsurface soils and groundwater with VOCs which exceed regulatory standards within the south, southwestern quadrants of the Site.

### **6.0 RECOMMENDATIONS**

Due to the elevated petroleum constituents encountered in soil and groundwater, DTCS recommends the following at this time:

- DTCS has identified petroleum impacted subsurface materials in the south, southwestern quadrants of the Site which exceed NYSDEC CP-51 soil quality standards. As such, DTCS recommends excavation and proper disposal of source material from within the identified areas surrounding Soil Borings SB-1 – SB-6.

Based upon field observations and analytical data obtained during the removal processes, further remedial recommendations may be made.

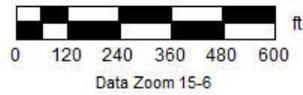
### **7.0 LIMITATIONS**

DTCS has prepared this report using reasonable efforts in each phase of its work to determine the extent of subsurface contamination (if any) within the locations of potential environmental concern. This report is not definitive, and should not be assumed to be a complete or specific definition of all conditions above or below grade. The conclusions/recommendations set forth herein are applicable only to the facts and conditions described at the time of this report.

**FIGURES**



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DT Consulting Services, Inc.  
 1291 Old Post Road  
 Ulster Park, New York 12487  
 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: 74 Griff Court, South Fallsburg, New York

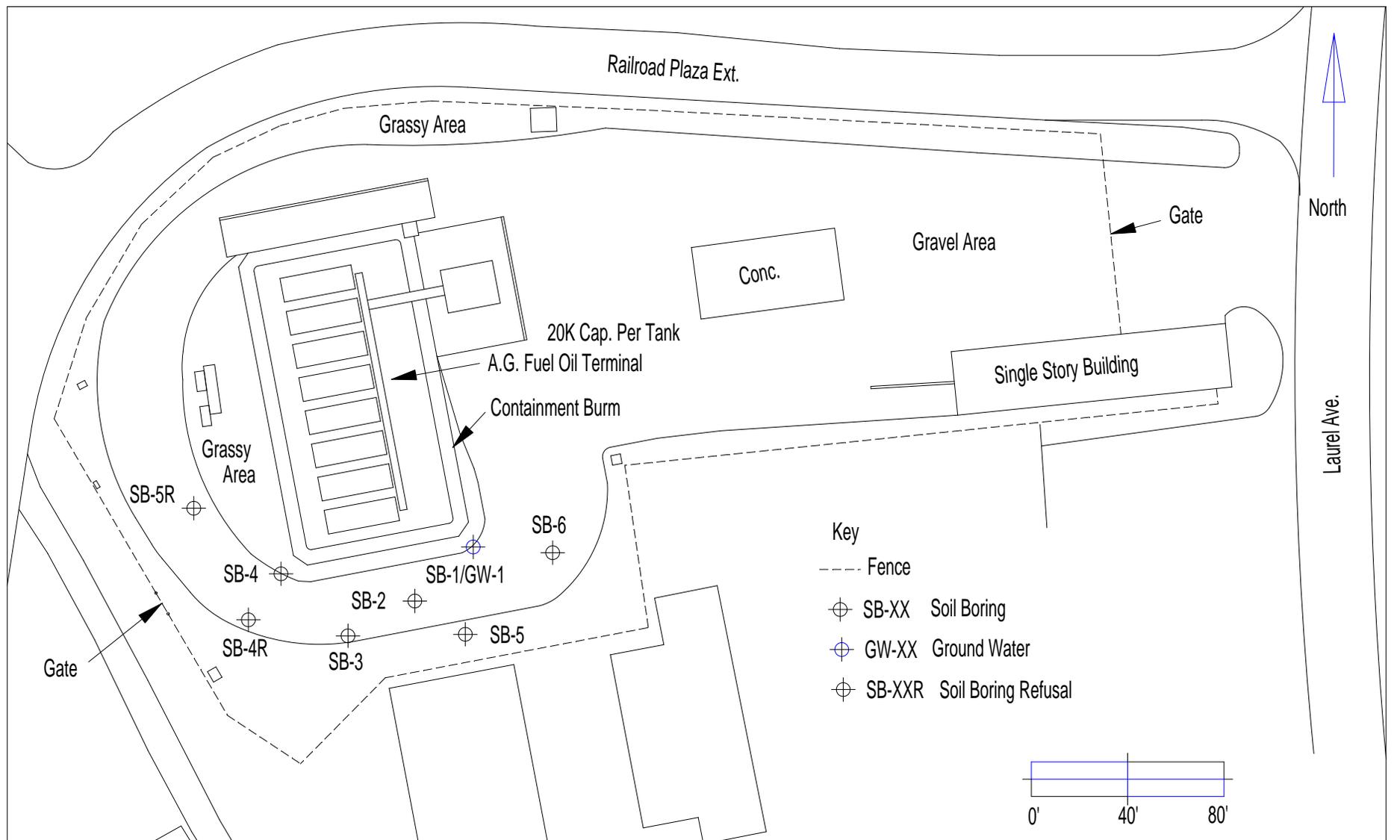
Title: Site Location Map

Spill No: 19-00538

Scale: Graphic

Drawn By: O.T.

Fig.#: 1



DT Consulting Services, Inc.  
 1291 Old Post Road  
 Ulster Park, New York 12487  
 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: 74 Griff Court, South Fallsburg, Sullivan County, New York

Title: Site (base) Map

Scale: Graphic

Drawn By: O.T.

Spill No: 19-00538

Fig.#: 2



DT Consulting Services, Inc.  
 1291 Old Post Road  
 Ulster Park, New York 12487  
 (845) 658-3484

Client: LL Fuel Storage, LLC

Location: 74 Griff Court, South Fallsburg, New York

Title: Photo Documentation

Spill No: 19-00538

Scale: None

Drawn By: O.T.

Fig.#: 3

**TABLES**

**Table 1: Summary of Soil Laboratory Analysis for Volatile Organic Compounds (VOCs)**

**Site:** KoscoHeritage – South Fallsburg Terminal  
74 Griff Court  
South Fallsburg, Sullivan County, New York

**Client Name:** LL Fuel Storage, LLC  
**Address:** Post Office Box 797  
Lake Katrine, New York 12449  
**Contact Name:** John Ringel

NYSDEC PBS NO. 3-123226/NYSDEC SPILL NO. 19-00538

Sample Location	SB-1		SB-1 GW		SB-2	SB-3	SB-4	SB-5	SB-6
Sample Number	1		2		3	4	5	6	7
Date Collected	9/13/2019		9/13/2019		9/13/2019	9/13/2019	9/13/2019	9/13/2019	9/13/2019
Matrix	Soil		Groundwater		Soil	Soil	Soil	Soil	Soil
Analytical Method	8260C - CP-51		8260C - CP-51		8260C - CP-51	8260C - CP-51	8260C - CP-51	8260C - CP-51	8260C - CP-51
Compound	Soils Guidance	Sample Con	Groundwater Guidance	Sample Con	Sample Con	Sample Con	Sample Con	Sample Con	Sample Con
1,2,4-Trimethylbenzene	3,600	<b><u>39000</u></b>	5	<b><u>150</u></b>	<b><u>360000</u></b>	2300	<b><u>88000</u></b>	<b><u>300000</u></b>	ND
1,3,5-Trimethylbenzene	8,400	<b><u>11000</u></b>	5	<b><u>33</u></b>	<b><u>33000</u></b>	150	ND	<b><u>95000</u></b>	ND
Benzene	60	<b><u>5100J</u></b>	0.7	<b><u>780</u></b>	<b><u>71000</u></b>	80	ND	ND	12
Ethylbenzene	1,000	<b><u>14000</u></b>	5	<b><u>380</u></b>	<b><u>130000</u></b>	680	<b><u>21000J</u></b>	ND	2.3J
Isopropylbenzene	2,300	ND	5	<b><u>32</u></b>	ND	48	ND	ND	ND
MTBE	930	ND	10	8.7	ND	7	ND	ND	ND
Naphthalene	12,000	5400J	10	<b><u>90</u></b>	<b><u>56000J</u></b>	300	<b><u>40000J</u></b>	<b><u>55000J</u></b>	ND
n-Butylbenzene	12,000	ND	5	4.6	<b><u>19000J</u></b>	71	<b><u>14000J</u></b>	ND	ND
n-Propylbenzene	3,900	<b><u>4800J</u></b>	5	<b><u>79</u></b>	<b><u>39000</u></b>	100	<b><u>29000</u></b>	<b><u>46000J</u></b>	ND
o-Xylene	260	<b><u>19000</u></b>	5	<b><u>120</u></b>	ND	ND	ND	ND	ND
p-&m-Xylenes	260	<b><u>57000</u></b>	5	<b><u>430</u></b>	<b><u>230000</u></b>	<b><u>510</u></b>	ND	ND	4.7
p-Isopropyltoluene	10,000	ND	5	1.8	ND	36	ND	ND	ND
sec-Butylbenzene	11,000	ND	5	2.7	ND	41	ND	<b><u>230000</u></b>	ND
tert-Butylbenzene	5,900	ND	5	0.31J	ND	2.9J	ND	<b><u>39000</u></b>	ND
Toluene	700	<b><u>5300J</u></b>	5	<b><u>140</u></b>	ND	18	ND	ND	9.4

Notes:

1. Soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb. Groundwater results are recorded in micrograms-per-liter (µg/L) or ppb.
2. ND = Undetected. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
3. The presented soil quality guidance values were adopted from the NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010 .
4. The presented guidance values were adopted by the NYSDEC Groundwater Quality Standards, Division of Water Technical & Operational Guidance Series (TOGS 1.1.1).
5. Analytical measurements exceeding guidance values are in bold type and underlined as such **100**.

**Table 1: Summary of Soil Laboratory Analysis for Semi-Volatile Organic Compounds (SVOCs)**

**Site:** KoscoHeritage – South Fallsburg Terminal  
 74 Griff Court  
 South Fallsburg, Sullivan County, New York

**Client Name:** LL Fuel Storage, LLC  
**Address:** Post Office Box 797  
 Lake Katrine, New York 12449  
**Contact Name:** John Ringel

**NYSDEC PBS NO. 3-123226/NYSDEC SPILL NO. 19-00538**

Sample Location	SB-1		SB-1 GW		SB-2	SB-3	SB-4	SB-5	SB-6
Sample Number	1		2		3	4	5	6	7
Date Collected	9/13/2019		9/13/2019		9/13/2019	9/13/2019	9/13/2019	9/13/2019	9/13/2019
Matrix	Soil		Groundwater		Soil	Soil	Soil	Soil	Soil
Analytical Method	8270 B/N - CP-51		8270 B/N - CP-51		8270 B/N - CP-51				
Compound	Soils		Groundwater		Sample Con				
	Guidance	Sample Con	Guidance	Sample Con					
Acenaphthene	20,000	ND	20	0.15	140J	ND	ND	ND	ND
Acenaphthylene	100,000	ND	NS	ND	ND	ND	ND	ND	ND
Anthracene	100,000	ND	50	ND	120	ND	110	ND	ND
Benzo(a)anthracene	1,000	ND	0	ND	ND	ND	ND	98J	ND
Benzo(a)pyrene	1,000	ND	0	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	ND	0.002	ND	ND	ND	ND	85J	ND
Benzo(g,h,i)perylene	100,000	ND	NS	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	ND	0	ND	ND	ND	ND	ND	ND
Chrysene	1,000	ND	0	ND	ND	ND	ND	100J	ND
Dibenz(a,h)anthracene	330	ND	NS	ND	ND	ND	ND	ND	ND
Fluoranthene	100,000	ND	50	ND	130J	ND	ND	200	ND
Fluorene	30,000	ND	50	0.22	ND	ND	ND	130J	ND
Indeno(1,2,3-cd)pyrene	500	ND	0	ND	ND	ND	ND	ND	ND
Naphthalene	12,000	1700	10	60	5900	71	1200	9500	ND
Phenanthrene	100,000	ND	50	0.15	730	93	800	310	ND
Pyrene	100,000	ND	50	ND	160	ND	65J	190	ND

Notes:

1. Soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb. Groundwater results are recorded in micrograms-per-liter (µg/L) or ppb.
2. ND = Undetected. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
3. The presented soil quality guidance values were adopted from the NYSDEC CP-51/Soil Cleanup Guidance, October, 21, 2010 .
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5. Analytical measurements exceeding guidance values are in bold type and underlined as such 100.

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**ATTACHMENTS**

**DT CONSULTING SERVICES, INC.**

**ATTACHMENT A**

DT Consulting Services, Inc. 1291 Old Post Road Ulster Park, New York 12487 (845) 658-3484		<b>Soil Boring Log</b> <b>SB-1</b>		Hole No: SB-1  Sheet 1 of 1		Date Started: 9-13-19  Date Finished: 9-13-19				
Client: LL Fuel Storage, LLC				Method of investigation: 2" Hollow Stem Samplers						
Location: 74 Griff Court, South Fallsburg, New York				Drilling Co: Core Down Drilling		Driller: A. Bellucci  D. Helper: O. Tanner		Weather:  Partly Cloudy  53° F @ 0830		
P. Manager:  Deborah Thompson		Geologist: Deborah Thompson		Drill Rig: Geoprobe						
Depth (ft.)	Sample					Sample Description	PID (ppm) Analytical Readings	Boring Details	Groundwater and Other Observations	
	No.	Depth (ft.)	Blows per 6"	"N"	Recovery (in.)					
4		1				Crushed stone and mixed fill, damp, slight odor.	35-378		Sampled subsurface soils  (7-9' bgs, SB-1)	
		2								3100
		3								4705
					48"					2100
8		5				Brown, silty sand, damp-wet at 7.5' bgs, strong odor.		Temporary groundwater  well set at 12' bgs.  Recorded DTW: 9.61  Sheen, odor detected.  Groundwater sample SB-1/GW		
		6							143	
		7							45	
					48"					
12		9				Red/brown, till, moist, slight odor.				
		10								
		11								
					48"					
16		13								
		14								
		15								
					48"					
20		17								
		18								
		19								
					48"					

Sample Types:

S=Hollow Spoon:   X  

R= Rock Core: \_\_\_\_\_

N = ASTM D1586

BGS = Below Grade Surface

Backfill Well Key



Cement



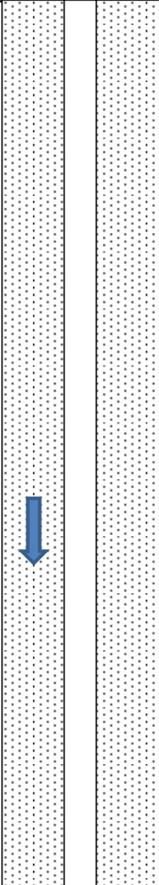
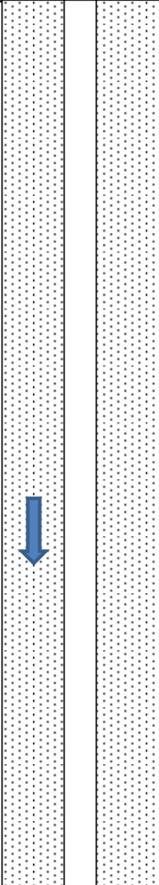
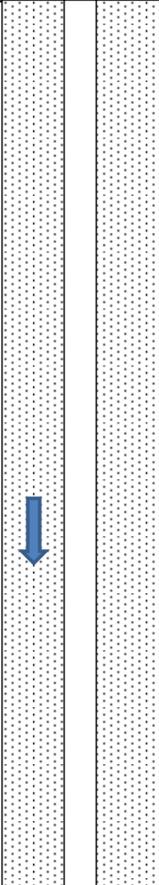
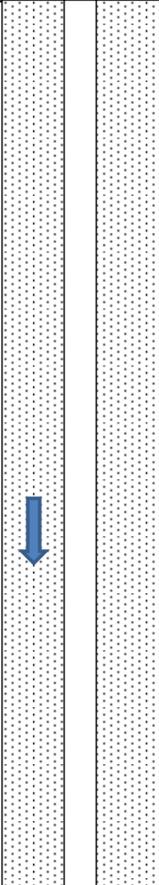
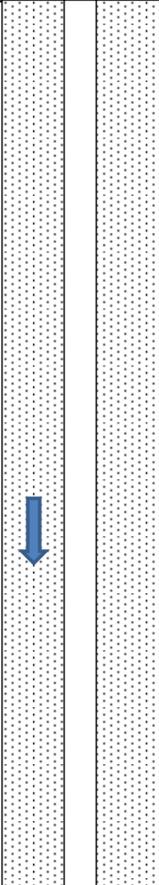
Native Fill



Borehole



Bentonite

<b>DT Consulting Services, Inc.</b> 1291 Old Post Road Ulster Park, New York 12487 (845) 658-3484		<b>Soil Boring Log</b> <b>SB-2</b>		Hole No: SB-2  Sheet 1 of 1		Date Started: 9-13-19  Date Finished: 9-13-19			
Client: LL Fuel Storage, LLC				Method of investigation: 2" Hollow Stem Samplers					
Location: 74 Griff Court, South Fallsburg, New York				Drilling Co: Core Down Drilling		Driller: A. Bellucci  D. Helper: O. Tanner		Weather:  Partly Cloudy	
P. Manager:  Deborah Thompson		Geologist: Deborah Thompson		Drill Rig: Geoprobe		53° F @ 0830			
Depth (ft.)	Sample					Sample Description	PID (ppm) Analytical Readings	Boring Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	"N"	Recovery (in.)				
4		1				Crushed stone and mixed fill, damp, slight odor.	25-138  4500		Sampled subsurface soils  (6-8' bgs, SB-2)
		2							
		3				Black organics, damp, strong odor.			
					46"	Red/brown, silty sand, damp-wet at 7.5' bgs, strong odor.			
8		5					800-1300		Groundwater documented at  7.5' bgs, odor, sheen.
		6							
		7							
					32"	Brown/gray, sand , saturated, moderate odor.			
12		9					80-120		
		10							
		11							
					46"				
16		13							
		14							
		15							
		17							
20		18							
		19							

Sample Types:

S=Hollow Spoon:     X    

R= Rock Core:                     

N = ASTM D1586

BGS = Below Grade Surface



Cement



Borehole

Backfill Well Key



Native Fill



Bentonite

<b>DT Consulting Services, Inc.</b> 1291 Old Post Road Ulster Park, New York 12487 (845) 658-3484		<b>Soil Boring Log</b> <b>SB-3</b>		Hole No: SB-3  Sheet 1 of 1		Date Started: 9-13-19  Date Finished: 9-13-19			
Client: LL Fuel Storage, LLC				Method of investigation: 2" Hollow Stem Samplers					
Location: 74 Griff Court, South Fallsburg, New York				Drilling Co: Core Down Drilling		Driller: A. Bellucci  D. Helper: O. Tanner  Drill Rig: Geoprobe			
P. Manager:  Deborah Thompson		Geologist: Deborah Thompson				Weather:  Partly Cloudy  53° F @ 0830			
Depth (ft.)	Sample					Sample Description	PID (ppm) Analytical Readings	Boring Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	"N"	Recovery (in.)				
4		1				Crushed stone and mixed fill, damp, slight odor.	105-431		Sampled subsurface soils  (10-12' bgs, SB-3)  Groundwater not encountered.
		2							
		3							
					34"				
8		5				Same.	1200-1429		
		6							
		7							
					32"				
12		9				Red/brown, till, damp-moist, strong odor.	337-1107		
		10							
		11							
					48"				
16		13				Red/brown, sand/gravel, moist, slight odor.	130		
		14							
		15							
		17							
		18							
		19							
		20							

Sample Types:

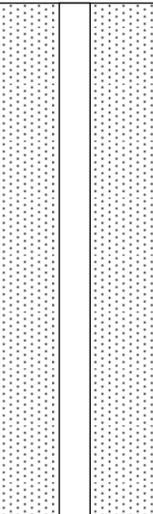
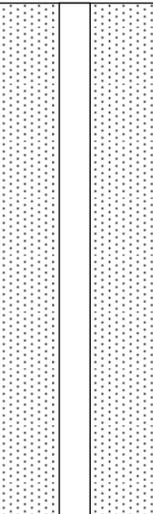
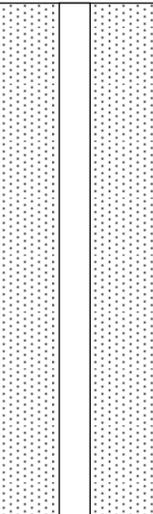
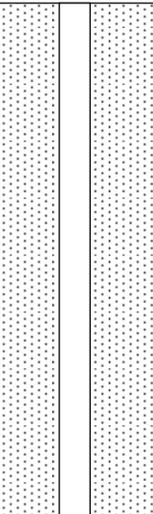
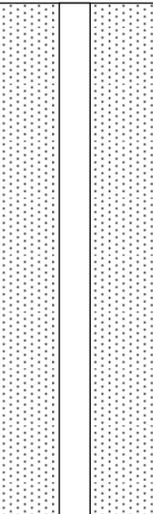
S=Hollow Spoon:     X    

R= Rock Core:                     

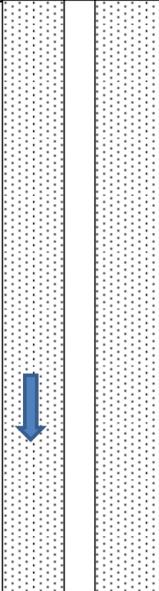
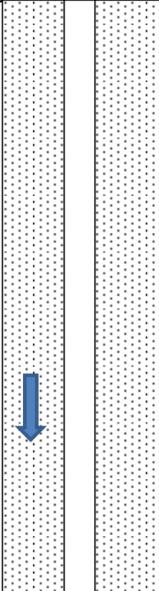
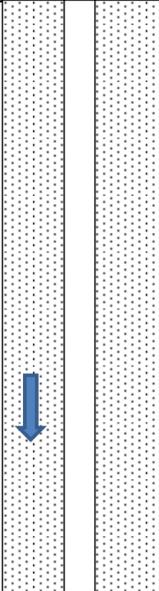
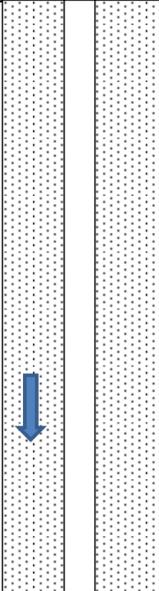
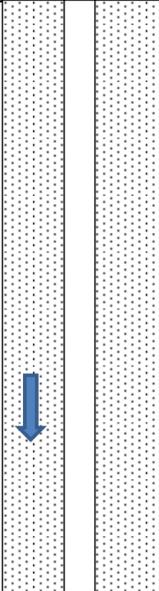
N = ASTM D1586      BGS = Below Grade Surface

Backfill Well Key

	Cement		Native Fill
	Borehole		Bentonite

<b>DT Consulting Services, Inc.</b> 1291 Old Post Road Ulster Park, New York 12487 (845) 658-3484		<b>Soil Boring Log</b> <b>SB-4</b>		Hole No: SB-4  Sheet 1 of 1		Date Started: 9-13-19  Date Finished: 9-13-19		
Client: LL Fuel Storage, LLC				Method of investigation: 2" Hollow Stem Samplers				
Location: 74 Griff Court, South Fallsburg, New York				Drilling Co: Core Down Drilling		Driller: A. Bellucci  D. Helper: O. Tanner  Drill Rig: Geoprobe		Weather:  Partly Cloudy  53° F @ 0830
P. Manager:  Deborah Thompson		Geologist: Deborah Thompson		Sample No.    Depth (ft.)    Blows per 6"    "N"    Recovery (in.) Description		PID (ppm)  Analytical  Readings	Boring  Details	Groundwater  and Other  Observations
Depth  (ft.)								
4		1				47-159		Sampled subsurface soils  (5-7' bgs, SB-4)  Groundwater not encountered.
		2						
		3						
					34"			
8		5				700-1300		
		6						
		7			29"			
12		9						
		10						
		11						
16		13						
		14						
		15						
20		17						
		18						
		19						
Sample Types:  S=Hollow Spoon: <u>  X  </u>  R= Rock Core: <u>                    </u>					Backfill Well Key  Cement  Native Fill  Borehole  Bentonite			
N = ASTM D1586      BGS = Below Grade Surface								

<b>DT Consulting Services, Inc.</b> 1291 Old Post Road Ulster Park, New York 12487 (845) 658-3484		<b>Soil Boring Log</b> <b>SB-5</b>		Hole No: SB-5  Sheet 1 of 1		Date Started: 9-13-19  Date Finished: 9-13-19			
Client: LL Fuel Storage, LLC				Method of investigation: 2" Hollow Stem Samplers					
Location: 74 Griff Court, South Fallsburg, New York				Drilling Co: Core Down Drilling		Driller: A. Bellucci  D. Helper: O. Tanner  Drill Rig: Geoprobe			
P. Manager:  Deborah Thompson		Geologist: Deborah Thompson				Weather:  Partly Cloudy  53° F @ 0830			
Depth (ft.)	Sample					Sample Description	PID (ppm) Analytical Readings	Boring Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	"N"	Recovery (in.)				
4		1				Asphalt and stone.	235-310  400-1600		Sampled subsurface soils  (5-7' bgs, SB-5)  Groundwater encountered  at 6' bgs.  Odor, sheen.
		2				Red/brown, mixed fill, damp, slight odor.			
		3							
					36"				
8		5				Same, saturated at 6' bgs, strong odor.  Refusal at 7' bgs.			
		6							
		7			25"				
12		9							
		10							
		11							
16		13							
		14							
		15							
		17							
		18							
		19							
20									
Sample Types:  S=Hollow Spoon: <u>    X    </u>  R= Rock Core: <u>                    </u>						<b>Backfill Well Key</b> 			
N = ASTM D1586      BGS = Below Grade Surface									

<b>DT Consulting Services, Inc.</b> 1291 Old Post Road Ulster Park, New York 12487 (845) 658-3484		<b>Soil Boring Log</b> <b>SB-6</b>		Hole No: SB-6  Sheet 1 of 1		Date Started: 9-13-19  Date Finished: 9-13-19			
Client: LL Fuel Storage, LLC				Method of investigation: 2" Hollow Stem Samplers					
Location: 74 Griff Court, South Fallsburg, New York				Drilling Co: Core Down Drilling		Driller: A. Bellucci  D. Helper: O. Tanner		Weather:  Partly Cloudy  53° F @ 0830	
P. Manager:  Deborah Thompson		Geologist: Deborah Thompson		Drill Rig: Geoprobe					
Depth (ft.)	Sample					Sample Description	PID (ppm) Analytical Readings	Boring Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	"N"	Recovery (in.)				
4		1				Red/brown, mixed fill, damp, slight odor.	10-15		Sampled subsurface soils  (6-8' bgs, SB-6)
		2							
		3							
					40"				
8		5				Same, saturated at 6' bgs, strong odor.	10-50		Groundwater encountered  at 6' bgs.  Odor, sheen.
		6							
		7							
					36"				
12		9					10-50		
		10							
		11							
16		13					10-50		
		14							
		15							
		17							
		18							
		19							
20							10-50		

Sample Types:

S=Hollow Spoon:     X    

R= Rock Core:                     

N = ASTM D1586      BGS = Below Grade Surface

Backfill Well Key

	Cement		Native Fill
	Borehole		Bentonite

**DT CONSULTING SERVICES, INC.**

**ATTACHMENT B**



# Technical Report

prepared for:

**DT Consulting Services**  
1291 Old Post Road  
Ulster Park NY, 12487  
**Attention: Deborah Thompson**

Report Date: 09/24/2019  
**Client Project ID: LL Fuel Storage, LLC South Fallsburg, NY**  
York Project (SDG) No.: 19I0619

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: 09/24/2019  
Client Project ID: LL Fuel Storage, LLC South Fallsburg, NY  
York Project (SDG) No.: 19I0619

**DT Consulting Services**  
1291 Old Post Road  
Ulster Park NY, 12487  
Attention: Deborah Thompson

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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 September 16, 2019 with a temperature of 1.8 C. The project was identified as your project: **LL Fuel Storage, LLC South Fallsburg, NY.**

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>
19I0619-01	SB-1	Soil	09/13/2019	09/16/2019
19I0619-02	SB-1 GW	Water	09/13/2019	09/16/2019
19I0619-03	SB-2	Soil	09/13/2019	09/16/2019
19I0619-04	SB-3	Soil	09/13/2019	09/16/2019
19I0619-05	SB-4	Soil	09/13/2019	09/16/2019
19I0619-06	SB-5	Soil	09/13/2019	09/16/2019
19I0619-07	SB-6	Soil	09/13/2019	09/16/2019

## **General Notes for York Project (SDG) No.: 19I0619**

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:**



**Benjamin Gulizia**  
Laboratory Director

**Date:** 09/24/2019





### Sample Information

**Client Sample ID:** SB-1

**York Sample ID:** 1910619-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
1910619	LL Fuel Storage, LLC South Fallsburg, NY	Soil	September 13, 2019 9:40 am	09/16/2019

**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-63-6	1,2,4-Trimethylbenzene	39000		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
108-67-8	1,3,5-Trimethylbenzene	11000		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
71-43-2	Benzene	5100	J	ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
100-41-4	Ethyl Benzene	14000		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
98-82-8	Isopropylbenzene	ND		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
91-20-3	Naphthalene	5400	J	ug/kg dry	2800	11000	1000	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,PADEP,NJIE	09/24/2019 06:54	09/24/2019 11:27	LLJ
104-51-8	n-Butylbenzene	ND		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
103-65-1	n-Propylbenzene	4800	J	ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
95-47-6	o-Xylene	19000		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
179601-23-1	p- & m- Xylenes	57000		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
108-88-3	Toluene	5300	J	ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 11:27	LLJ
1330-20-7	Xylenes, Total	76000		ug/kg dry	2800	5600	1000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/24/2019 06:54	09/24/2019 11:27	LLJ

**Surrogate Recoveries**

	Surrogate	Result	Acceptance Range
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	98.1 %	77-125
2037-26-5	Surrogate: SURRE: Toluene-d8	101 %	85-120
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	103 %	76-130



### Sample Information

**Client Sample ID:** SB-1

**York Sample ID:** 19I0619-01

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 9:40 am

09/16/2019

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
120-12-7	Anthracene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
218-01-9	Chrysene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
206-44-0	Fluoranthene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
86-73-7	Fluorene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
91-20-3	<b>Naphthalene</b>	<b>1700</b>		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
85-01-8	Phenanthrene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
129-00-0	Pyrene	ND		ug/kg dry	46	92	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 08:41	KH
	<b>Surrogate Recoveries</b>	<b>Result</b>						<b>Acceptance Range</b>			
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	94.1 %						22-108			
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	80.2 %						21-113			
1718-51-0	Surrogate: SURR: Terphenyl-d14	86.6 %						24-116			

**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
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### Sample Information

**Client Sample ID:** SB-1 **York Sample ID:** 19I0619-01  
**York Project (SDG) No.:** 19I0619 **Client Project ID:** LL Fuel Storage, LLC South Fallsburg, NY  
**Matrix:** Soil **Collection Date/Time:** September 13, 2019 9:40 am  
**Date Received:** 09/16/2019

**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	89.1		%	0.100	1	SM 2540G Certifications: CTDOH	09/17/2019 17:58	09/18/2019 11:10	TJM

### Sample Information

**Client Sample ID:** SB-1 GW **York Sample ID:** 19I0619-02  
**York Project (SDG) No.:** 19I0619 **Client Project ID:** LL Fuel Storage, LLC South Fallsburg, NY  
**Matrix:** Water **Collection Date/Time:** September 13, 2019 10:01 am  
**Date Received:** 09/16/2019

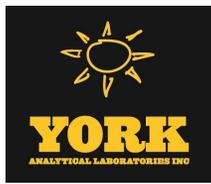
**Volatile Organics, CP-51 (STARS) Low level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-63-6	1,2,4-Trimethylbenzene	150		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/19/2019 21:33	LLJ
108-67-8	1,3,5-Trimethylbenzene	33		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
71-43-2	Benzene	780		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/19/2019 21:33	LLJ
100-41-4	Ethyl Benzene	380		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/19/2019 21:33	LLJ
98-82-8	Isopropylbenzene	32		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	8.7		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
91-20-3	Naphthalene	90	B	ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/17/2019 10:34	09/18/2019 15:21	LLJ
104-51-8	n-Butylbenzene	4.6		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
103-65-1	n-Propylbenzene	79		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
95-47-6	o-Xylene	120		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/17/2019 10:34	09/19/2019 21:33	LLJ
179601-23-1	p- & m- Xylenes	430		ug/L	10	20	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/17/2019 10:34	09/19/2019 21:33	LLJ
99-87-6	p-Isopropyltoluene	1.8		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
135-98-8	sec-Butylbenzene	2.7		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ
98-06-6	tert-Butylbenzene	0.31	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/18/2019 15:21	LLJ



### Sample Information

**Client Sample ID:** SB-1 GW

**York Sample ID:** 19I0619-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Water

September 13, 2019 10:01 am

09/16/2019

**Volatile Organics, CP-51 (STARS) Low level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-88-3	<b>Toluene</b>	<b>140</b>		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/19/2019 21:33	LLJ
1330-20-7	<b>Xylenes, Total</b>	<b>550</b>		ug/L	12	30	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/17/2019 10:34	09/19/2019 21:33	LLJ
<b>Surrogate Recoveries</b>		<b>Result</b>			<b>Acceptance Range</b>						
17060-07-0	Surrogate: <i>SURR:</i> <i>1,2-Dichloroethane-d4</i>	100 %			69-130						
2037-26-5	Surrogate: <i>SURR:</i> <i>Toluene-d8</i>	98.6 %			81-117						
460-00-4	Surrogate: <i>SURR:</i> <i>p-Bromofluorobenzene</i>	96.6 %			79-122						

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes: EXT-EM**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	<b>Acenaphthene</b>	<b>0.15</b>		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
208-96-8	Acenaphthylene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
120-12-7	Anthracene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
56-55-3	Benzo(a)anthracene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
50-32-8	Benzo(a)pyrene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
218-01-9	Chrysene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
206-44-0	Fluoranthene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
86-73-7	<b>Fluorene</b>	<b>0.22</b>		ug/L	0.057	0.057	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.057	0.057	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/18/2019 17:27	OW
91-20-3	<b>Naphthalene</b>	<b>60</b>		ug/L	14	29	5	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:34	09/19/2019 17:24	KH



Sample Information

Client Sample ID: SB-1 GW

York Sample ID: 19I0619-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Water

September 13, 2019 10:01 am

09/16/2019

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes:

Sample Notes: EXT-EM

Sample Prepared by Method: EPA 3510C

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for Phenanthrene and Pyrene, and a Surrogate Recoveries section.

Sample Information

Client Sample ID: SB-2

York Sample ID: 19I0619-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 11:08 am

09/16/2019

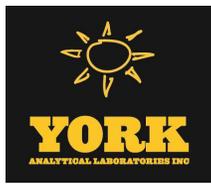
Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Lists various volatile organic compounds and their results.



### Sample Information

**Client Sample ID:** SB-2

**York Sample ID:** 19I0619-03

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 11:08 am

09/16/2019

**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	15000	30000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 12:21	LLJ
135-98-8	sec-Butylbenzene	ND		ug/kg dry	15000	30000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 12:21	LLJ
98-06-6	tert-Butylbenzene	ND		ug/kg dry	15000	30000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 12:21	LLJ
108-88-3	Toluene	ND		ug/kg dry	15000	30000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/24/2019 06:54	09/24/2019 12:21	LLJ
1330-20-7	<b>Xylenes, Total</b>	<b>230000</b>		ug/kg dry	15000	30000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/24/2019 06:54	09/24/2019 12:21	LLJ
	<b>Surrogate Recoveries</b>	<b>Result</b>						<b>Acceptance Range</b>			
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	87.5 %						77-125			
2037-26-5	Surrogate: SURRE: Toluene-d8	102 %						85-120			
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	105 %						76-130			

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	<b>Acenaphthene</b>	<b>140</b>	J	ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
120-12-7	<b>Anthracene</b>	<b>120</b>	J	ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
218-01-9	Chrysene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
206-44-0	<b>Fluoranthene</b>	<b>130</b>	J	ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH



### Sample Information

**Client Sample ID:** SB-2 **York Sample ID:** 19I0619-03  
**York Project (SDG) No.:** 19I0619 **Client Project ID:** LL Fuel Storage, LLC South Fallsburg, NY **Matrix:** Soil **Collection Date/Time:** September 13, 2019 11:08 am **Date Received:** 09/16/2019

#### Semi-Volatiles, CP-51 (formerly STARS) List

#### Log-in Notes:

#### Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
86-73-7	Fluorene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
91-20-3	<b>Naphthalene</b>	<b>5900</b>		ug/kg dry	180	360	5	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 12:28	KH
85-01-8	<b>Phenanthrene</b>	<b>730</b>		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
129-00-0	<b>Pyrene</b>	<b>160</b>		ug/kg dry	73	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:09	KH
<b>Surrogate Recoveries</b>		<b>Result</b>			<b>Acceptance Range</b>						
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	97.4 %			22-108						
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	78.6 %			21-113						
1718-51-0	Surrogate: SURR: Terphenyl-d14	84.3 %			24-116						

#### Total Solids

#### Log-in Notes:

#### Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	<b>83.1</b>		%	0.100	1	SM 2540G Certifications: CTDOH	09/17/2019 17:58	09/18/2019 11:10	TJM

### Sample Information

**Client Sample ID:** SB-3 **York Sample ID:** 19I0619-04  
**York Project (SDG) No.:** 19I0619 **Client Project ID:** LL Fuel Storage, LLC South Fallsburg, NY **Matrix:** Soil **Collection Date/Time:** September 13, 2019 11:59 am **Date Received:** 09/16/2019

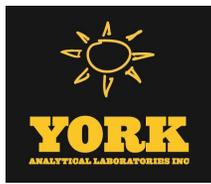
#### Volatile Organics, CP-51 (formerly STARS) List

#### Log-in Notes:

#### Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>2300</b>	QL-02	ug/kg dry	230	460	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 16:58	LLJ
108-67-8	<b>1,3,5-Trimethylbenzene</b>	<b>150</b>		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
71-43-2	<b>Benzene</b>	<b>80</b>		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
100-41-4	<b>Ethyl Benzene</b>	<b>680</b>		ug/kg dry	230	460	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 16:58	LLJ



### Sample Information

**Client Sample ID:** SB-3

**York Sample ID:** 19I0619-04

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 11:59 am

09/16/2019

**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
98-82-8	Isopropylbenzene	48		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	7.0		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
91-20-3	Naphthalene	300	VOA-E	ug/kg dry	2.3	9.2	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,PADEP,NJ	09/18/2019 07:00	09/18/2019 14:38	LLJ
104-51-8	n-Butylbenzene	71		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
103-65-1	n-Propylbenzene	100		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
95-47-6	o-Xylene	ND		ug/kg dry	230	460	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 16:58	LLJ
179601-23-1	p- & m- Xylenes	510		ug/kg dry	230	460	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 16:58	LLJ
99-87-6	p-Isopropyltoluene	36		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
135-98-8	sec-Butylbenzene	41		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
98-06-6	tert-Butylbenzene	2.9	J	ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
108-88-3	Toluene	18		ug/kg dry	2.3	4.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/18/2019 07:00	09/18/2019 14:38	LLJ
1330-20-7	Xylenes, Total	510		ug/kg dry	230	460	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/20/2019 06:00	09/20/2019 16:58	LLJ
<b>Surrogate Recoveries</b>		<b>Result</b>			<b>Acceptance Range</b>						
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	97.7 %			77-125						
2037-26-5	Surrogate: SURRE: Toluene-d8	98.8 %			85-120						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	124 %			76-130						

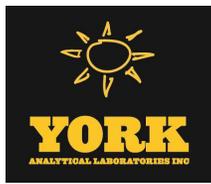
**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
120-12-7	Anthracene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH



### Sample Information

**Client Sample ID:** SB-3

**York Sample ID:** 19I0619-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 11:59 am

09/16/2019

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
218-01-9	Chrysene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
206-44-0	Fluoranthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
86-73-7	Fluorene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
91-20-3	<b>Naphthalene</b>	<b>71</b>	J	ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
85-01-8	<b>Phenanthrene</b>	<b>93</b>		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH
129-00-0	Pyrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 09:38	KH

**Surrogate Recoveries**

**Result**

**Acceptance Range**

4165-60-0	Surrogate: SURR: Nitrobenzene-d5	72.7 %			22-108
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	63.6 %			21-113
1718-51-0	Surrogate: SURR: Terphenyl-d14	65.9 %			24-116

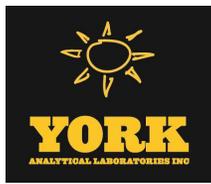
**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	<b>91.0</b>		%	0.100	1	SM 2540G Certifications: CTDOH	09/17/2019 17:58	09/18/2019 11:10	TJM



### Sample Information

**Client Sample ID:** SB-4

**York Sample ID:** 19I0619-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 12:40 pm

09/16/2019

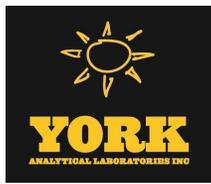
**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-63-6	1,2,4-Trimethylbenzene	88000	QL-02	ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
71-43-2	Benzene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
100-41-4	Ethyl Benzene	21000	J	ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
98-82-8	Isopropylbenzene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
91-20-3	Naphthalene	40000	J	ug/kg dry	14000	57000	5000	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,PADEPNJIE	09/20/2019 06:00	09/20/2019 18:18	LLJ
104-51-8	n-Butylbenzene	14000	J	ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
103-65-1	n-Propylbenzene	29000		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
95-47-6	o-Xylene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
135-98-8	sec-Butylbenzene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
98-06-6	tert-Butylbenzene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
108-88-3	Toluene	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 18:18	LLJ
1330-20-7	Xylenes, Total	ND		ug/kg dry	14000	29000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/20/2019 06:00	09/20/2019 18:18	LLJ
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>								
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	101 %	77-125								
2037-26-5	Surrogate: SURRE: Toluene-d8	100 %	85-120								
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	104 %	76-130								



### Sample Information

**Client Sample ID:** SB-4

**York Sample ID:** 19I0619-05

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 12:40 pm

09/16/2019

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
120-12-7	<b>Anthracene</b>	<b>110</b>		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
218-01-9	Chrysene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
206-44-0	Fluoranthene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
86-73-7	Fluorene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
91-20-3	<b>Naphthalene</b>	<b>1200</b>		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
85-01-8	<b>Phenanthrene</b>	<b>800</b>		ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH
129-00-0	<b>Pyrene</b>	<b>65</b>	J	ug/kg dry	47	94	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:07	KH

**Surrogate Recoveries**

**Result**

**Acceptance Range**

4165-60-0	Surrogate: SURR: Nitrobenzene-d5	93.0 %		22-108
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	76.1 %		21-113
1718-51-0	Surrogate: SURR: Terphenyl-d14	79.7 %		24-116

**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
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### Sample Information

**Client Sample ID:** SB-4

**York Sample ID:** 19I0619-05

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 12:40 pm

09/16/2019

**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	87.1		%	0.100	1	SM 2540G Certifications: CTDOH	09/17/2019 17:58	09/18/2019 11:10	TJM

### Sample Information

**Client Sample ID:** SB-5

**York Sample ID:** 19I0619-06

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 2:22 pm

09/16/2019

**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-63-6	1,2,4-Trimethylbenzene	30000	QL-02	ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
108-67-8	1,3,5-Trimethylbenzene	95000		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
71-43-2	Benzene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
100-41-4	Ethyl Benzene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
98-82-8	Isopropylbenzene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
91-20-3	Naphthalene	55000	J	ug/kg dry	31000	120000	10000	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,PADEPNJ	09/20/2019 06:00	09/20/2019 19:11	LLJ
104-51-8	n-Butylbenzene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
103-65-1	n-Propylbenzene	46000	J	ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
95-47-6	o-Xylene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
135-98-8	sec-Butylbenzene	230000		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ



### Sample Information

**Client Sample ID:** SB-5

**York Sample ID:** 19I0619-06

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 2:22 pm

09/16/2019

**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
98-06-6	tert-Butylbenzene	39000	QL-02, J	ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
108-88-3	Toluene	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 06:00	09/20/2019 19:11	LLJ
1330-20-7	Xylenes, Total	ND		ug/kg dry	31000	62000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/20/2019 06:00	09/20/2019 19:11	LLJ
<b>Surrogate Recoveries</b>		<b>Result</b>			<b>Acceptance Range</b>						
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	90.7 %			77-125						
2037-26-5	Surrogate: SURRE: Toluene-d8	101 %			85-120						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	107 %			76-130						

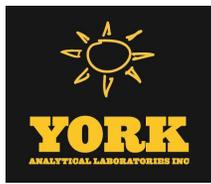
**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
120-12-7	Anthracene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
56-55-3	Benzo(a)anthracene	98	J	ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
205-99-2	Benzo(b)fluoranthene	85	J	ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
218-01-9	Chrysene	100	J	ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
206-44-0	Fluoranthene	200		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
86-73-7	Fluorene	130	J	ug/kg dry	76	150	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH



### Sample Information

**Client Sample ID:** SB-5

**York Sample ID:** 19I0619-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 2:22 pm

09/16/2019

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	9500		ug/kg dry	190	380	5	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 18:10	KH
85-01-8	Phenanthrene	310		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
129-00-0	Pyrene	190		ug/kg dry	76	150	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 10:35	KH
<b>Surrogate Recoveries</b>		<b>Result</b>			<b>Acceptance Range</b>						
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	96.2 %			22-108						
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	75.8 %			21-113						
1718-51-0	Surrogate: SURR: Terphenyl-d14	79.4 %			24-116						

**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	81.2		%	0.100	1	SM 2540G Certifications: CTDOH	09/17/2019 17:58	09/18/2019 11:10	TJM

### Sample Information

**Client Sample ID:** SB-6

**York Sample ID:** 19I0619-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 12:00 am

09/16/2019

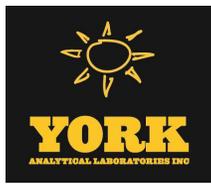
**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
71-43-2	Benzene	12		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
100-41-4	Ethyl Benzene	2.3	J	ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ



### Sample Information

**Client Sample ID:** SB-6

**York Sample ID:** 19I0619-07

**York Project (SDG) No.**

**Client Project ID**

**Matrix**

**Collection Date/Time**

**Date Received**

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 12:00 am

09/16/2019

**Volatile Organics, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	1.9	7.7	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,PADEP,NJIC	09/20/2019 12:49	09/20/2019 20:24	LLJ
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
95-47-6	o-Xylene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
179601-23-1	<b>p- &amp; m- Xylenes</b>	<b>4.7</b>		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
108-88-3	<b>Toluene</b>	<b>9.4</b>		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/20/2019 12:49	09/20/2019 20:24	LLJ
1330-20-7	<b>Xylenes, Total</b>	<b>4.7</b>		ug/kg dry	1.9	3.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/20/2019 12:49	09/20/2019 20:24	LLJ
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>								
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	103 %	77-125								
2037-26-5	Surrogate: SURRE: Toluene-d8	99.2 %	85-120								
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	99.5 %	76-130								

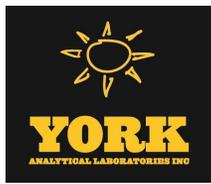
**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
120-12-7	Anthracene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH



### Sample Information

**Client Sample ID:** SB-6

**York Sample ID:** 19I0619-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19I0619

LL Fuel Storage, LLC South Fallsburg, NY

Soil

September 13, 2019 12:00 am

09/16/2019

**Semi-Volatiles, CP-51 (formerly STARS) List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
218-01-9	Chrysene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
206-44-0	Fluoranthene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
86-73-7	Fluorene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
91-20-3	Naphthalene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
85-01-8	Phenanthrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
129-00-0	Pyrene	ND		ug/kg dry	45	89	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/18/2019 08:14	09/19/2019 11:03	KH
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>								
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	82.3 %	22-108								
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	73.7 %	21-113								
1718-51-0	Surrogate: SURR: Terphenyl-d14	76.7 %	24-116								

**Total Solids**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	91.2		%	0.100	1	SM 2540G Certifications: CTDOH	09/17/2019 17:58	09/18/2019 11:10	TJM



### Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
19I0619-01	SB-1	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
19I0619-02	SB-1 GW	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
19I0619-03	SB-2	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
19I0619-04	SB-3	40mL Vial with Stir Bar-Cool 4° C
19I0619-05	SB-4	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
19I0619-06	SB-5	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
19I0619-07	SB-6	40mL Vial with Stir Bar-Cool 4° C



## Sample and Data Qualifiers Relating to This Work Order

VOA-E	The concentration reported for this analyte is an estimated value above the linear range of the instrument for EPA SW846-5035/8260 (>200ppb). Re-analysis using 5035/8260 medium level prep. resulted in a detection below the reporting limit (<500ppb).
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.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
EXT-EM	The sample exhibited emulsion formation during the extraction process. This may affect surrogate recoveries.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

### 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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