



architects + engineers

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April 5, 2018

Ms. Heather Bishop
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233

**Re: Soil Vapor Extraction Blower Vapor Sampling and Laboratory Analyses Summary Report
Luitpold Pharmaceuticals, Inc.
26 Precision Drive
Shirley, New York
H2M Project No. LUIT 1602**

Dear Ms. Bishop:

On behalf of Luitpold Pharmaceuticals (Luitpold), H2M architects + engineers (H2M) provides herein the results of the soil vapor extraction (SVE) blower vapor sampling for the above-referenced site.

Background

H2M was retained by Luitpold to install a SSDS to address sub-slab soil vapor contamination, including 1,1,1-trichloroethane (TCA), Tetrachloroethene (PCE) and 1,1-dichloroethene (DCE), at 26 Precision Drive in Shirley, NY.

Implementation of a sub-slab depressurization system was selected as the mitigation remedy following a pilot test conducted at the site in May 2014. Due to low soil permeability, as confirmed during the pilot test, the SSDS required a soil vapor extraction blower. A remediation system was designed by H2M and approved by the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) on February 4, 2016. The Town of Brookhaven Planning Department approved the SSDS project on August 10, 2017. A Town of Brookhaven Building Permit 17B119335 was issued on October 17, 2017. Construction of the SSDS began on December 7, 2017 and was completed December 21, 2017. System startup and inspection was performed by the Town of Brookhaven Building Department on January 10, 2018.

Sampling Activity

The air sampling was conducted on March 15, 2018. Samples were collected at an influent, intermediate, and effluent sample point located on the soil vapor extraction blower. All air samples were collected over a two-hour period utilizing vacuum canisters.

Summary and Conclusions

Each of the air samples were analyzed for volatile organic compounds (VOCs) by EPA Method TO-15. Laboratory analyses were performed by York Analytical Laboratories in Stratford, Connecticut. Results of the laboratory analyses are summarized in Table 1. No analytes exceeded their respective Annual Guideline Concentrations (AGC). The carbon filtration system is operating in accordance with NYSDEC and NYSDOH guidelines.

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April 5, 2018
Page 2



If you should have any questions or require additional information, please feel free to contact the undersigned at (631) 756-8000 x1628.

Very truly yours,

H2M architects + engineers

A handwritten signature in black ink, appearing to read 'Joseph Loesch'.

Joseph Loesch
Project Engineer

Attachments:
Table 1 – Vapor Sampling SVE System
Appendix A – Analytical Laboratory Report

TABLE 1 – Vapor Sampling SVE System

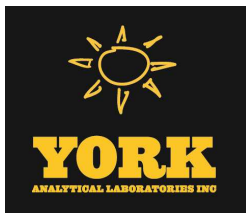
Table 1. Vapor Sampling SVE System
Luitpold Pharmaceuticals Site - 26 Precision Drive, Shirley, NY



Sample ID:	Influent	Int.	Effluent
Sample Date:	3/15/2018	3/15/2018	3/15/2018
Units:	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
<i>Volatile Organic Compounds (VOCs)</i>			
1,1,1-Trichloroethane	3.3	7.9	
1,2,4-Trimethylbenzene		1.5	1.4
1,2-Dichloroethene (cis)			
1,3,5-Trimethylbenzene			
2-Butanone	3	1.2	1.7
4-Methyl-2-pentanone			3.1
Acetone	9.1	6.2	8
Benzene	0.56	4.4	
Carbon Tetrachloride	0.51	0.25	
Chloroform			0.82
Chloromethane	0.83	0.86	0.89
cis-1,2-Dichloroethylene	11	14	17
Cyclohexane	0.83		
Dichlorodifluoromethane	1.9	2	4.5
Ethyl acetate			4.8
Ethylbenzene	0.7	3.3	1.3
Isopropanol	1.4	0.76	3.2
Methyl ethyl ketone			
Methylene chloride	1.3		3.6
n-Hexane	0.57		0.74
o-Xylene	0.87	1.4	0.59
Xylene (total)	2.2	3.6	1.6
p-Ethyltoluene		1.4	1.4
Propylene	0.3	0.25	0.41
Styrene	0.91	2.1	1.2
Tetrachloroethylene	190	1.6	2.5
Tetrahydrofuran	1.9	2.6	6.5
Toluene	1.5	5.3	21
Trichloroethylene	4.5	7.1	0.22
Trichlorofluoromethane	2.6	3.3	2.8

APPENDIX A

ANALYTICAL LABORATORY REPORT



Technical Report

prepared for:

H2M architects + engineers

290 Broad Hollow Rd

Melville NY, 11747

Attention: Joe Loesch

Report Date: 03/27/2018

Client Project ID: LUIT1602

York Project (SDG) No.: 18C0585

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
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STRATFORD, CT 06615
(203) 325-1371

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

RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Report Date: 03/27/2018
Client Project ID: LUIT1602
York Project (SDG) No.: 18C0585

H2M architects + engineers
290 Broad Hollow Rd
Melville NY, 11747
Attention: Joe Loesch

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 March 19, 2018 and listed below. The project was identified as your project: **LUIT1602**.

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>
18C0585-01	LUIT INF	Vapor Extraction	03/15/2018	03/19/2018
18C0585-02	LUIT INT	Vapor Extraction	03/15/2018	03/19/2018
18C0585-03	LUIT EFF	Vapor Extraction	03/15/2018	03/19/2018

General Notes for York Project (SDG) No.: 18C0585

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: 03/27/2018





Sample Information

Client Sample ID: LUIT INF

York Sample ID: 18C0585-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18C0585	LUIT1602	Vapor Extraction	March 15, 2018 3:15 pm	03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND	IS-LO	ug/m ³	0.92	1.34	EPA TO-15 Certifications:	03/27/2018 03:25	03/27/2018 03:25	LDS
71-55-6	1,1,1-Trichloroethane	3.3		ug/m ³	0.73	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND	IS-LO	ug/m ³	0.92	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	1.0	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.73	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.54	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.13	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
120-82-1	1,2,4-Trichlorobenzene	ND	IS-LO	ug/m ³	0.99	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
95-63-6	1,2,4-Trimethylbenzene	ND	IS-LO	ug/m ³	0.66	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	1.0	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
95-50-1	1,2-Dichlorobenzene	ND	IS-LO	ug/m ³	0.81	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.54	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.62	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.94	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
108-67-8	1,3,5-Trimethylbenzene	ND	IS-LO	ug/m ³	0.66	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.89	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
541-73-1	1,3-Dichlorobenzene	ND	IS-LO	ug/m ³	0.81	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.62	1.34	EPA TO-15 Certifications:	03/27/2018 03:25	03/27/2018 03:25	LDS
106-46-7	1,4-Dichlorobenzene	ND	IS-LO	ug/m ³	0.81	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.97	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
78-93-3	2-Butanone	3.0		ug/m ³	0.40	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS



Sample Information

Client Sample ID: LUIT INF

York Sample ID: 18C0585-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:15 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
591-78-6	* 2-Hexanone	ND		ug/m ³	1.1	1.34	EPA TO-15 Certifications:	03/27/2018 03:25	03/27/2018 03:25	LDS
107-05-1	3-Chloropropene	ND		ug/m ³	2.1	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.55	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
67-64-1	Acetone	9.1		ug/m ³	0.64	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
107-13-1	Acrylonitrile	ND		ug/m ³	0.29	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
71-43-2	Benzene	0.56		ug/m ³	0.43	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
100-44-7	Benzyl chloride	ND	IS-LO	ug/m ³	0.69	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.90	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-25-2	Bromoform	ND	IS-LO	ug/m ³	1.4	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
74-83-9	Bromomethane	ND		ug/m ³	0.52	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-15-0	Carbon disulfide	ND		ug/m ³	0.42	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
56-23-5	Carbon tetrachloride	0.51		ug/m ³	0.21	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m ³	0.62	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-00-3	Chloroethane	ND		ug/m ³	0.35	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
67-66-3	Chloroform	ND		ug/m ³	0.65	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
74-87-3	Chloromethane	0.83		ug/m ³	0.28	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
156-59-2	cis-1,2-Dichloroethylene	11		ug/m ³	0.13	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.61	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
110-82-7	Cyclohexane	0.83		ug/m ³	0.46	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
124-48-1	Dibromochloromethane	ND		ug/m ³	1.1	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-71-8	Dichlorodifluoromethane	1.9		ug/m ³	0.66	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
141-78-6	* Ethyl acetate	ND		ug/m ³	0.97	1.34	EPA TO-15 Certifications:	03/27/2018 03:25	03/27/2018 03:25	LDS



Sample Information

Client Sample ID: LUIT INF

York Sample ID: 18C0585-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:15 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	0.70	IS-LO	ug/m ³	0.58	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m ³	1.4	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
67-63-0	Isopropanol	1.4		ug/m ³	0.66	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.55	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.48	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-09-2	Methylene chloride	1.3		ug/m ³	0.93	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
142-82-5	n-Heptane	ND		ug/m ³	0.55	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
110-54-3	n-Hexane	0.57		ug/m ³	0.47	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
95-47-6	o-Xylene	0.87	IS-LO	ug/m ³	0.58	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
179601-23-1	p- & m- Xylenes	2.2	IS-LO	ug/m ³	1.2	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
622-96-8	* p-Ethyltoluene	ND	IS-LO	ug/m ³	0.66	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
115-07-1	* Propylene	0.30		ug/m ³	0.23	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
100-42-5	Styrene	0.91	IS-LO	ug/m ³	0.57	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
127-18-4	Tetrachloroethylene	190		ug/m ³	0.23	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
109-99-9	* Tetrahydrofuran	1.9		ug/m ³	0.79	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
108-88-3	Toluene	1.5		ug/m ³	0.50	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.53	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.61	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
79-01-6	Trichloroethylene	4.5		ug/m ³	0.18	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
75-69-4	Trichlorofluoromethane (Freon 11)	2.6		ug/m ³	0.75	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
108-05-4	Vinyl acetate	ND		ug/m ³	0.47	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
593-60-2	Vinyl bromide	ND		ug/m ³	0.59	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS



Sample Information

Client Sample ID: LUIT INF

York Sample ID: 18C0585-01

York Project (SDG) No.

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Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:15 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m ³	0.086	1.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 03:25	03/27/2018 03:25	LDS
Surrogate Recoveries		Result		Acceptance Range						
460-00-4	Surrogate: p-Bromofluorobenzene	133 %	S-08		70-130					

Sample Information

Client Sample ID: LUIT INT

York Sample ID: 18C0585-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:20 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND	IS-LO	ug/m ³	0.93	1.349	EPA TO-15 Certifications:	03/27/2018 04:31	03/27/2018 04:31	LDS
71-55-6	1,1,1-Trichloroethane	7.9		ug/m ³	0.74	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND	IS-LO	ug/m ³	0.93	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	1.0	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.74	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.55	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.13	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
120-82-1	1,2,4-Trichlorobenzene	ND	IS-LO	ug/m ³	1.0	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
95-63-6	1,2,4-Trimethylbenzene	1.5	IS-LO	ug/m ³	0.66	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	1.0	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
95-50-1	1,2-Dichlorobenzene	ND	IS-LO	ug/m ³	0.81	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.55	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.62	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS



Sample Information

Client Sample ID: LUIT INT

York Sample ID: 18C0585-02

York Project (SDG) No.

Client Project ID

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18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:20 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.94	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
108-67-8	1,3,5-Trimethylbenzene	ND	IS-LO	ug/m ³	0.66	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.90	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
541-73-1	1,3-Dichlorobenzene	ND	IS-LO	ug/m ³	0.81	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.62	1.349	EPA TO-15 Certifications:	03/27/2018 04:31	03/27/2018 04:31	LDS
106-46-7	1,4-Dichlorobenzene	ND	IS-LO	ug/m ³	0.81	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.97	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
78-93-3	2-Butanone	1.2		ug/m ³	0.40	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
591-78-6	* 2-Hexanone	ND		ug/m ³	1.1	1.349	EPA TO-15 Certifications:	03/27/2018 04:31	03/27/2018 04:31	LDS
107-05-1	3-Chloropropene	ND		ug/m ³	2.1	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.55	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
67-64-1	Acetone	6.2		ug/m ³	0.64	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
107-13-1	Acrylonitrile	ND		ug/m ³	0.29	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
71-43-2	Benzene	4.4		ug/m ³	0.43	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
100-44-7	Benzyl chloride	ND	IS-LO	ug/m ³	0.70	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.90	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-25-2	Bromoform	ND	IS-LO	ug/m ³	1.4	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
74-83-9	Bromomethane	ND		ug/m ³	0.52	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-15-0	Carbon disulfide	ND		ug/m ³	0.42	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
56-23-5	Carbon tetrachloride	0.25		ug/m ³	0.21	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m ³	0.62	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-00-3	Chloroethane	ND		ug/m ³	0.36	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS



Sample Information

Client Sample ID: LUIT INT

York Sample ID: 18C0585-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:20 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-66-3	Chloroform	ND		ug/m ³	0.66	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
74-87-3	Chloromethane	0.86		ug/m ³	0.28	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
156-59-2	cis-1,2-Dichloroethylene	14		ug/m ³	0.13	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.61	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
110-82-7	Cyclohexane	ND		ug/m ³	0.46	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
124-48-1	Dibromochloromethane	ND		ug/m ³	1.1	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-71-8	Dichlorodifluoromethane	2.0		ug/m ³	0.67	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
141-78-6	* Ethyl acetate	ND		ug/m ³	0.97	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
100-41-4	Ethyl Benzene	3.3	IS-LO	ug/m ³	0.59	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m ³	1.4	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
67-63-0	Isopropanol	0.76		ug/m ³	0.66	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.55	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.49	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
75-09-2	Methylene chloride	ND		ug/m ³	0.94	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
142-82-5	n-Heptane	ND		ug/m ³	0.55	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
110-54-3	n-Hexane	ND		ug/m ³	0.48	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
95-47-6	o-Xylene	1.4	IS-LO	ug/m ³	0.59	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
179601-23-1	p- & m- Xylenes	3.6	IS-LO	ug/m ³	1.2	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
622-96-8	* p-Ethyltoluene	1.4	IS-LO	ug/m ³	0.66	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
115-07-1	* Propylene	0.28		ug/m ³	0.23	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
100-42-5	Styrene	2.1	IS-LO	ug/m ³	0.57	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS
127-18-4	Tetrachloroethylene	1.6		ug/m ³	0.23	1.349	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 04:31	03/27/2018 04:31	LDS



Sample Information

Client Sample ID: LUIT INT

York Sample ID: 18C0585-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 3:20 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Tetrahydrofuran, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropylene, Trichloroethylene, Trichlorofluoromethane (Freon 11), Vinyl acetate, Vinyl bromide, Vinyl Chloride, and Surrogate Recoveries for p-Bromofluorobenzene.

Sample Information

Client Sample ID: LUIT EFF

York Sample ID: 18C0585-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 4:00 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113), and 1,1,2-Trichloroethane.



Sample Information

Client Sample ID: LUIT EFF

York Sample ID: 18C0585-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 4:00 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.56	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.14	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
120-82-1	1,2,4-Trichlorobenzene	ND	IS-LO	ug/m ³	1.0	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
95-63-6	1,2,4-Trimethylbenzene	1.4	IS-LO	ug/m ³	0.68	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	1.1	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
95-50-1	1,2-Dichlorobenzene	ND	IS-LO	ug/m ³	0.84	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.56	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.64	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.97	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
108-67-8	1,3,5-Trimethylbenzene	ND	IS-LO	ug/m ³	0.68	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.92	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
541-73-1	1,3-Dichlorobenzene	ND	IS-LO	ug/m ³	0.84	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.64	1.391	EPA TO-15 Certifications:	03/27/2018 05:36	03/27/2018 05:36	LDS
106-46-7	1,4-Dichlorobenzene	ND	IS-LO	ug/m ³	0.84	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
123-91-1	1,4-Dioxane	ND		ug/m ³	1.0	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
78-93-3	2-Butanone	1.7		ug/m ³	0.41	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
591-78-6	* 2-Hexanone	ND		ug/m ³	1.1	1.391	EPA TO-15 Certifications:	03/27/2018 05:36	03/27/2018 05:36	LDS
107-05-1	3-Chloropropene	ND		ug/m ³	2.2	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
108-10-1	4-Methyl-2-pentanone	3.1		ug/m ³	0.57	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
67-64-1	Acetone	8.0		ug/m ³	0.66	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
107-13-1	Acrylonitrile	ND		ug/m ³	0.30	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
71-43-2	Benzene	ND		ug/m ³	0.44	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS



Sample Information

Client Sample ID: LUIT EFF

York Sample ID: 18C0585-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 4:00 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-44-7	Benzyl chloride	ND	IS-LO	ug/m ³	0.72	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.93	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-25-2	Bromoform	ND	IS-LO	ug/m ³	1.4	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
74-83-9	Bromomethane	ND		ug/m ³	0.54	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-15-0	Carbon disulfide	ND		ug/m ³	0.43	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
56-23-5	Carbon tetrachloride	ND		ug/m ³	0.22	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m ³	0.64	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-00-3	Chloroethane	ND		ug/m ³	0.37	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
67-66-3	Chloroform	0.82		ug/m ³	0.68	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
74-87-3	Chloromethane	0.89		ug/m ³	0.29	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
156-59-2	cis-1,2-Dichloroethylene	17		ug/m ³	0.14	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.63	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
110-82-7	Cyclohexane	ND		ug/m ³	0.48	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
124-48-1	Dibromochloromethane	ND		ug/m ³	1.2	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-71-8	Dichlorodifluoromethane	4.5		ug/m ³	0.69	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
141-78-6	* Ethyl acetate	4.8		ug/m ³	1.0	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
100-41-4	Ethyl Benzene	1.3	IS-LO	ug/m ³	0.60	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m ³	1.5	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
67-63-0	Isopropanol	3.2		ug/m ³	0.68	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.57	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.50	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-09-2	Methylene chloride	3.6		ug/m ³	0.97	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS



Sample Information

Client Sample ID: LUIT EFF

York Sample ID: 18C0585-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

18C0585

LUIT1602

Vapor Extraction

March 15, 2018 4:00 pm

03/19/2018

Volatile Organics, EPA TO15 Full List

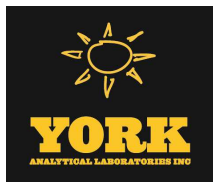
Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
142-82-5	n-Heptane	0.74		ug/m ³	0.57	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
110-54-3	n-Hexane	0.59		ug/m ³	0.49	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
95-47-6	o-Xylene	1.6	IS-LO	ug/m ³	0.60	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
179601-23-1	p- & m- Xylenes	5.0	IS-LO	ug/m ³	1.2	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
622-96-8	* p-Ethyltoluene	1.4	IS-LO	ug/m ³	0.68	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
115-07-1	* Propylene	0.41		ug/m ³	0.24	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
100-42-5	Styrene	1.2	IS-LO	ug/m ³	0.59	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
127-18-4	Tetrachloroethylene	2.5		ug/m ³	0.24	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
109-99-9	* Tetrahydrofuran	6.5		ug/m ³	0.82	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
108-88-3	Toluene	21		ug/m ³	0.52	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.55	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.63	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
79-01-6	Trichloroethylene	0.22		ug/m ³	0.19	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-69-4	Trichlorofluoromethane (Freon 11)	2.8		ug/m ³	0.78	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
108-05-4	Vinyl acetate	ND		ug/m ³	0.49	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
593-60-2	Vinyl bromide	ND		ug/m ³	0.61	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.089	1.391	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	03/27/2018 05:36	03/27/2018 05:36	LDS
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	<i>Surrogate: p-Bromofluorobenzene</i>	120 %	70-130							





Sample and Data Qualifiers Relating to This Work Order

S-08	The recovery of this surrogate was outside of QC limits.
QL-03	This LCS analyte recovered outside of acceptance limits. The LCS contains approximately 70 compounds, a limited number of which may be outside acceptance windows.
IS-LO	The internal std associated with this target compound did not meet acceptance criteria (area <50% CCV) at the stated dilution due to matrix effects. Sample was rerun to confirm matrix effects.
CCV-A	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>30% Difference for average Rf). This applies to detected analytes only.

Definitions and Other Explanations

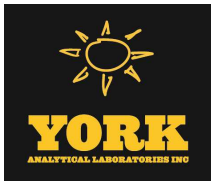
*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration 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.



YORK
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Stratford, CT 06615
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www.yorklab.com

Field Chain-of-Custody Record - AIR

YORK Project No.
18C0585

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
signature binds you to YORK's Standard Terms & Conditions.

Your Page 1 of 1

YOUR INFORMATION		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company: H2M	Address: 538 Broad hollow Rd Methuville NY	Company: SAME	Address: SAME	Company: SAME	Address: SAME	LUIT1602	RUSH - Next Day	RUSH - Two Day	RUSH - Three Day
Phone: 631 756 8000 x6628	Contact: J. Loesch	Phone:	Contact:	Phone:	Contact:	LUIT1602	RUSH - Four Day	Standard (5-7 Day)	
E-mail: jloesch@hzm.com		E-mail:		E-mail:					
Air Matrix Codes		Samples From		Report / EDD Type		YORK Reg. Comp.			
AI - Indoor Ambient Air	AO - Outdoor Amb. Air	AE - Vapor Extraction Well/Process Gas/Effluent	AS - Soil Vapor/Sub-Slab	New York	CT RCP	Standard Excel EDD	Compared to the following Regulation(s): (please fill in)		
				New Jersey	QA Report	EQulS (Standard)			
				Connecticut	NY ASP A Package	NYSDCEC EQulS			
				Pennsylvania	NY ASP B Package	NJDEP SRP HazSite			
				Other	Other:				
Report To:		Company:		Address:		YOUR PO#:			
SAME		SAME		SAME					
Phone:		Contact:		E-mail:					
631 756 8000 x6628		J. Loesch		jloesch@hzm.com					

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)

J. Loesch
[Signature]

Certified Canisters: Batch	Individual	Please enter the following REQUIRED Field Data				Reporting Units: ug/m ³	ppbv	ppmv
		Canister Vacuum Before Sampling (in Hg)	Canister Vacuum After Sampling (in Hg)	Canister ID	Flow Cont. ID			
LUIT INF	3/15 15:15	-27	0	454	5225	70-15		
LUIT INT	3/15 15:20	-28	0	Y52	Y3	70-15		
LUIT EFF	3/15 16:00	-30	-4.5	Y67	Y46	70-15		
Comments:		Detection Limits Required		6 Liter Canister		X		
		≤ 1 ug/m ³		NYSDCEC V1 Limits				
		Routine Survey		X				
Samples Relinquished by / Company		Date/Time		Samples Relinquished by / Company		Date/Time		
31618		3/16/18 11am		KRoach		3/19/18 9AM		
Samples Received by / Company		Date/Time		Samples Received by / Company		Date/Time		
Samples Relinquished by / Company		Date/Time		Samples Received in LAB by		Date/Time		
				JLoesch		3-19-18 9am		