

VOLATILE VAPOR INTRUSION (VVI) REPORT

**BETHPAGE HIGH SCHOOL
10 CHERRY AVENUE
BETHPAGE, NEW YORK 11714**

**PREPARED FOR:
BETHPAGE UNION FREE SCHOOL DISTRICT
10 CHERRY AVENUE
BETHPAGE, NEW YORK 11714**

**JCB PROJECT #: 19-42656
MARCH 2019**

**J.C. BRODERICK & ASSOCIATES, INC.
Environmental Consulting & Testing**

**1775 Expressway Drive North
Hauppauge, New York 11788
631-584-5492 Fax: 631-584-3395**



Table of Contents

Section No. 1.0: Introduction.....	1
Section No. 2.0: Site Description and Location.....	1
Section No. 3.0: Volatile Vapor Intrusion (VVI) Evaluation.....	1
Section No. 3.1: Pre-Work Field Preparations.....	1
Section No. 3.2: Subsurface Vapor Sample Collection	2
Section No. 3.3: Indoor Air Sample Collection	2
Section No. 3.3.1: Crawlspace/Basement Air Sample Collection	3
Section No. 3.3.2: 1st Floor Air Sample Collection.....	3
Section No. 3.4: Outdoor (Ambient) Air Sample Collection	3
Section No. 4.0: Laboratory Analytical Summary	3
Section No. 5.0: Decision Matrices	5
Section No. 6.0: Quality Assurance and Quality Control (QA/QC) Procedures	6
Section No. 7.0: Findings.....	7
Section No. 7.1: Previous Analytical Results Trend Analysis	7
Section No. 8.0: Conclusions.....	9
Section No. 9.0: Recommendations	9
Section No. 10.0: Certification.....	9

List of Tables

Table No. 1 – Volatile Vapor Intrusion Analytical Results of Detected Compounds via EPA Method TO-15
Table No. 2 – Volatile Chemicals Utilized in NYSDOH Decision Matrices
Table No. 3 – Total VOCs ($\mu\text{g}/\text{m}^3$) Detected Over Time

List of Graphs

Graph No. 1 – Total VOCs ($\mu\text{g}/\text{m}^3$) Detected Over Time – Subsurface Sample Locations
Graph No. 2 – Total VOCs ($\mu\text{g}/\text{m}^3$) Detected Over Time – Interior/Ambient Sample Locations

List of Figures

Figure 1 - Site Location Map
Figure 2 - Subsurface, Crawlspace and Basement Sampling Locations
Figure 3 - 1st Floor and Ambient Sampling Locations

Appendices

Appendix A - Figures
Appendix B - Field Photograph Logs
Appendix C - Laboratory Analytical Report

Section No. 1.0: Introduction

J.C. Broderick and Associates, Inc. (JCB) was retained by the Bethpage Union Free School District (Bethpage) to investigate the potential for volatile vapor intrusion (VVI) as a result of the contamination emanating from the nearby Bethpage Community Park site. JCB performed VVI air sampling within the Bethpage High School. The sampling protocol was performed essentially in accordance with the requirements of the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", Final Version, October 2006.

Section No. 2.0: Site Description and Location

The Subject Site is located at 10 Cherry Avenue Bethpage, New York 11714. The Subject Site is located on the southeast corner of the intersection formed by Stewart and Cherry Avenues. According to the United States Geological Survey (USGS) *Huntington, New York, 1992 7.5 Minute Series Topographical Map*, the Subject Site is situated at an approximate elevation of 121 feet (ft) above mean sea level. The location of the Subject Site is shown on the Site Location Map, Appendix-A Figure-1.

Section No. 3.0: Volatile Vapor Intrusion (VVI) Evaluation

The design scope outlined in the Volatile Vapor Intrusion (VVI) Investigation Work Plan (IWP) dated July 2012 was followed during the volatile vapor intrusion evaluations. The following sections describe the procedures taken.

Section No. 3.1: Pre-Work Field Preparations

Prior to setup, a pre-sampling inspection was performed to evaluate the physical layout and conditions of the school building, to specifically determine the location of each sample, identify conditions that may affect or interfere with the proposed sampling and to prepare the building for sampling.

- To document conditions during indoor air sampling and ultimately to aid in the interpretation of the sampling results, the following actions were taken:
 - The storage of volatile chemicals was identified.
 - The use of heating or air conditioning systems during sampling was noted.
 - Floor plan sketches were drawn which include: the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, locations of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system supply and return registers, compass orientation (north) and footings that create separate foundation sections. Photographs were taken to accompany the floor plan sketches.
 - Any pertinent observations, including readings from a Photo-Ionization Detector (PID) and other field instrumentation, were recorded.

Section No. 3.2: Subsurface Vapor Sample Collection

The following summarizes the manner in which subsurface vapor samples were collected. Please refer to Figure No. 2 - Subsurface, Crawlspace and Basement Sample Locations for additional details.

- For the collection of the subsurface vapor samples, a probe was fabricated from ½-inch diameter, threaded brass pipe with a barbed tubing connection. The two (2) layers of 6-mil polyethylene sheeting were penetrated and a one (1) inch diameter hole was drilled, utilizing a hammer drill, into the sand floor of the crawlspace extending approximately two (2) inches below the top of the sand. The pipe was lowered into the hole, but not flush to the bottom and set into place utilizing hydrated bentonite powder, which contains no Volatile Organic Compounds (VOCs). A five (5) gallon plastic container was placed on top of the plastic sheeting and above the vapor point. The container was sealed to the plastic sheeting utilizing modeling clay and duct tape. A Teflon-lined, ¼-inch I.D. disposable polyethylene tubing was then utilized to connect the barbed connection of the vapor point to a clean-certified, 6-liter SUMMA[®] canister, provided by York Analytical Labs, Inc. (York) through a flow controller pre-set for an eight (8) hour long sample duration. The tubing included a tee connection and valve to a purging vacuum pump calibrated for a flow rate of less than 0.2 liters per minute. The tubing, probe and subsurface soil was purged of at least one (1) liter of vapor prior to sample collection. Upon completion of the sampling, the polyethylene sheeting was replaced on the floor and secured in place with duct tape.
- Helium (He) was introduced into the atmosphere under the pail, as a tracer gas, to assure the viability of the vapor point seals with the atmosphere. The tracer gas was monitored in the purge air before sampling and outside of all seals before, during and after sampling, utilizing a Myron Helium Detector. In addition, Helium (He) was analyzed for in the SUMMA[®] canister and if detected at more than ten (10) percent, the sample would be considered invalid and retaken.
- On February 21, 2019, a total of two (2) subsurface vapor samples were collected.
 - One (1) subsurface sample was collected from beneath the north end of the west crawlspace under the west side school entrance.
 - One (1) subsurface sample was collected from beneath the south end of the west crawlspace under the southwest cafeteria "A".

Section No. 3.3: Indoor Air Sample Collection

The following summarizes the manner in which indoor air samples were collected:

- Sample flow rates conformed to the specifications in the sample collection method (less than 0.2 liters per minute) and were consistent with the hours of operation of the school building. Samples were taken from areas where personnel and occupants would not interfere with the sampling. The samples were collected, utilizing conventional sampling methods, in laboratory clean-certified, 6-liter SUMMA[®] canisters, provided by York equipped with a flow controller pre-set for an eight (8) hour long sample duration. As per the guidance requirements, the samples were collected at a height approximately three (3) feet above the floor to represent a height at which occupants are normally seated.

Section No. 3.3.1: Crawlspace/Basement Air Sample Collection

Please refer to Figure No. 2 - Subsurface, Crawlspace and Basement Sample Locations for additional details

- On February 21, 2019, a total of two (2) crawlspace and one (1) basement air samples were collected.
 - One (1) air sample was collected from the north end of the west crawlspace under the west side school entrance.
 - One (1) air sample was collected from the south end of the west crawlspace under the southwest cafeteria "A".
 - One (1) air sample was collected from the intersection of the two (2) hallways in the basement of the administration building.

Section No. 3.3.2: 1st Floor Air Sample Collection

Please refer to Figure No. 3 - 1st Floor and Ambient Sample Locations for additional details.

- On February 21, 2019, one (1) first floor air sample was collected.
 - One (1) air sample was collected from within Cafeteria "A" located in the southwest corner of the high school building.

Section No. 3.4: Outdoor (Ambient) Air Sample Collection

An outdoor (ambient) air sample was collected simultaneously with subsurface and indoor samples to evaluate the potential influence, if any, of outdoor air on indoor air quality. To obtain a representative sample which meets the data quality objectives, the outdoor air sample was collected in a manner consistent with that for indoor air samples. The sample was collected, utilizing conventional sampling methods, in a laboratory clean-certified, 6-liter SUMMA[®] canister, provided by York equipped with a flow controller pre-set for an eight (8) hour sample duration. As per the guidance requirements, the sample was collected at a height approximately three (3) feet above the floor. Please refer to Figure No. 3 - 1st Floor and Ambient Sample Locations for additional details.

- On February 21, 2019, one (1) outdoor (ambient) air sample was collected.
 - One (1) air sample was collected from outside the west side of the high school building adjacent to Classroom Number 117.

Section No. 4.0: Laboratory Analytical Summary

The air samples were collected into laboratory supplied, clean-certified, 6-liter SUMMA[®] canisters, and assigned individual identification numbers. Chain of custody documents were prepared and the samples were then delivered to an independent New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis.

York Analytical Labs, Inc. provided laboratory analytical services. Copies of York's NYSDOH certifications are available upon request.

Air samples submitted for laboratory analysis were analyzed for Volatile Organic Compounds (VOCs) utilizing the Environmental Protection Agency Toxic Organics 15 (EPA TO-15) list. Subsurface soil vapor samples were also analyzed for Helium.

The laboratory analysis results for the air samples collected were reviewed and compared to the 90th percentile as listed in Table C2 EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA canister method found in NYSDOH's "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006.

The following table summarizes the Air Sampling Analytical Results of Detected Compounds.

Table No. 1: Volatile Vapor Intrusion Analytical Results of Detected Compounds via EPA Method TO-15								
Client Sample ID	Background Values	North Subsurface ¹	South Subsurface ¹	North Crawlspace	South Crawlspace	1 st Floor Cafeteria "A"	Admin Wing Basement	Ambient
TO-15 List	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1,1,1-Trichloroethane (TCA)	20.6	ND	ND	ND	ND	ND	0.93	ND
1,1,2-Trichloroethane	1.5	ND	ND	ND	ND	0.65	ND	ND
1,2,4-Trimethylbenzene	9.5	4.20	ND	ND	ND	1.20	0.44	ND
1,2-Dichlorobenzene	1.2	ND	ND	ND	ND	0.90	ND	ND
1,3,5-Trimethylbenzene	3.7	1.60	ND	ND	ND	0.62	ND	ND
1,3-Dichlorobenzene	2.4	ND	ND	ND	ND	0.85	ND	ND
1,3-Dichloropropane	NA	ND	ND	ND	ND	0.55	ND	ND
1,4-Dichlorobenzene	5.5	ND	ND	ND	ND	0.90	ND	ND
2-Butanone	12	9.70	22.0	0.92	0.86	1.60	2.20	0.85
4-Methyl-2-pentanone	6	1.40	ND	ND	ND	0.80	ND	ND
Acetone	98.9	290	330	7.30	5.80	7.90	12.0	3.70
Benzene	9.4	3.10	5.20	0.65	0.66	1.20	0.70	0.67
Carbon Tetrachloride	1.3	0.60	ND	0.42	0.47	1.20	0.46	0.44
Chlorobenzene	0.9	ND	ND	ND	ND	0.58	ND	ND
Chloromethane	3.7	ND	ND	ND	ND	1.40	ND	ND
cis 1,2-Dichloroethene	1.9	ND	ND	ND	ND	0.44	ND	ND
1,1-Dichloroethene	1.4	ND	ND	ND	ND	0.44	ND	ND
Cyclohexane	NA	1.9	ND	ND	ND	0.64	0.84	ND
Dichlorodifluoromethane (Freon 12)	16.5	2.50	ND	1.80	1.80	2.10	1.80	1.60
Trichlorotrifluoroethane (Freon 113)	3.5	ND	ND	ND	ND	1.40	ND	ND
Ethyl Acetate	5.4	ND	ND	ND	ND	1.20	0.82	ND
Ethylbenzene	5.7	5.20	24.0	0.40	ND	1.00	1.40	ND
Hexachlorobutadiene	6.8	ND	ND	ND	ND	2.20	ND	ND
Isopropanol	250	8.40	ND	1.50	1.10	2.40	5.20	0.71
Methyl Methacrylate	NA	ND	ND	ND	ND	0.67	ND	ND
Methylene Chloride	10	ND	ND	0.79	0.65	2.60	1.50	0.62

Table No. 1:
Volatile Vapor Intrusion Analytical Results of Detected Compounds via EPA Method TO-15

Client Sample ID	Background Values	North Subsurface ¹	South Subsurface ¹	North Crawlspace	South Crawlspace	1 st Floor Cafeteria "A"	Admin Wing Basement	Ambient
TO-15 List	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
n-Heptane	NA	5.70	6.70	ND	ND	0.86	ND	ND
n-Hexane	10.2	4.60	8.60	0.39	0.43	1.10	0.40	0.36
o-Xylene	7.9	4.70	7.80	ND	ND	1.10	0.42	ND
p- & m- Xylene	22.2	12.0	26.0	0.81	ND	2.80	1.10	ND
p-Ethyltoluene	3.6	3.90	ND	ND	ND	1.20	0.44	ND
Styrene	1.9	ND	ND	ND	ND	0.83	1.20	ND
Tetrachloroethene (PCE)	15.9	ND	ND	ND	ND	1.40	ND	ND
Tetrahydrofuran	NA	18.0	37.0	ND	ND	0.66	ND	ND
Toluene	43	340	1,400	2.20	2.30	4.50	6.30	1.10
Trichloroethene (TCE)	4.2	ND	ND	ND	ND	0.64	ND	ND
Trichlorofluoromethane (Freon 11)	18.1	ND	ND	1.40	1.40	2.20	1.50	1.20
Vinyl Acetate	NA	ND	ND	1.40	ND	0.42	ND	ND
Vinyl Chloride	<1.9	ND	ND	ND	ND	ND	ND	ND
Helium	10%	ND	ND	----	----	----	----	----

Notes:

µg/m³ = parts per billion

NA = Background Value Not Established

ND=Not Detected above the laboratory minimum detection limit

Background Values = Table C2 EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA canister method - 90th percentile

¹ The State of New York does not have any standards, criteria, or guidance values for concentrations of volatile chemicals in subsurface vapors

Compounds in Gray are used in Decision Matrices A, B, & C. - See Section 5.0 and Table No. 2 for additional information.

Helium was used as a tracer gas, a detection of over 10% would indicate a breakthrough in the subsurface probe seal.

Section No. 5.0: Decision Matrices

Decision matrices are risk management tools developed by the NYSDOH to provide guidance on a cases-by-case basis about actions that should be taken to address current and potential exposures related to soil vapor intrusion. The matrices are intended to be used when evaluating the results from buildings with full slab foundations. Due to the presence of polyethylene sheeting covering the crawlspace sand, the structure was deemed to contain a full slab for the purpose of this investigation.

The NYSDOH has currently developed three (3) matrices to use as tools in making decisions when soil vapor may be entering buildings. JCB implemented the matrices and the following table summarizes the results:

Table No. 2: Volatile Chemicals Utilized in NYSDOH Decision Matrices		
Compound	Soil Vapor/Indoor Air Decision Matrix	Result
1,1,1-Trichloroethane (TCA)	Matrix B	No Further Action
Carbon Tetrachloride	Matrix A	No Further Action
cis 1,2-Dichloroethene	Matrix A	No Further Action
1,1-Dichloroethene	Matrix A	No Further Action
Methylene Chloride	Matrix B	No Further Action
Tetrachloroethene (PCE)	Matrix B	No Further Action
Trichloroethene (TCE)	Matrix A	No Further Action
Vinyl Chloride	Matrix C	No Further Action
Notes: A total of eight (8) chemicals have been assigned to decision matrices by the NYSDOH, May 2017.		

The results of the matrices indicate that “No Further Action” is required for all eight (8) volatile organic chemicals utilized in the NYSDOH Decision Matrices.

The concentrations detected in the indoor air samples are likely due to the daily operations within the building or outdoor sources rather than soil vapor intrusion given the concentrations detected in the subsurface vapor samples.

Section No. 6.0: Quality Assurance and Quality Control (QA/QC) Procedures

- In order to prevent cross-contamination between sampling locations, all re-usable sampling equipment which came into contact with sample materials was decontaminated prior to each use. Equipment used for sample collection was wiped clean, washed in a solution of Alconox and thoroughly rinsed with potable water. New and dedicated polyethylene tubing was used for collection of each subsurface sample. All sampling personnel wore disposable latex, nylon, or nitrile gloves during sampling events. At a minimum, gloves were changed between locations and before each laboratory sample was collected.
- The field sampling team maintained sampling log sheets summarizing the following:
 - Sample identification;
 - Canister ID Number;
 - Regulator ID Number;
 - Date and time of sample collection;
 - Sampling height;
 - Sampling methods and devices;
 - The volume of air sampled;
 - The vacuum of canisters before and after sample collection;
 - Chain of custody protocols and records used to track samples from sampling point to analysis.

Subsequent to sample collection, the Summa[®] canister was labeled with the sampling location, time, and samplers initials.

Section No. 7.0: Findings

Based upon the review of the VVI laboratory analysis results all detectable concentrations observed were reported well below published occupational health guidelines. In addition, all detectable concentrations observed in the occupied spaces of the school buildings were below their background values as reported in EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA canister method 90th Percentile found in NYSDOH's "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006. The concentrations detected in the indoor air samples are likely due to the daily operations within the building or outdoor sources rather than soil vapor intrusion given the concentrations detected in the subsurface soil vapor samples.

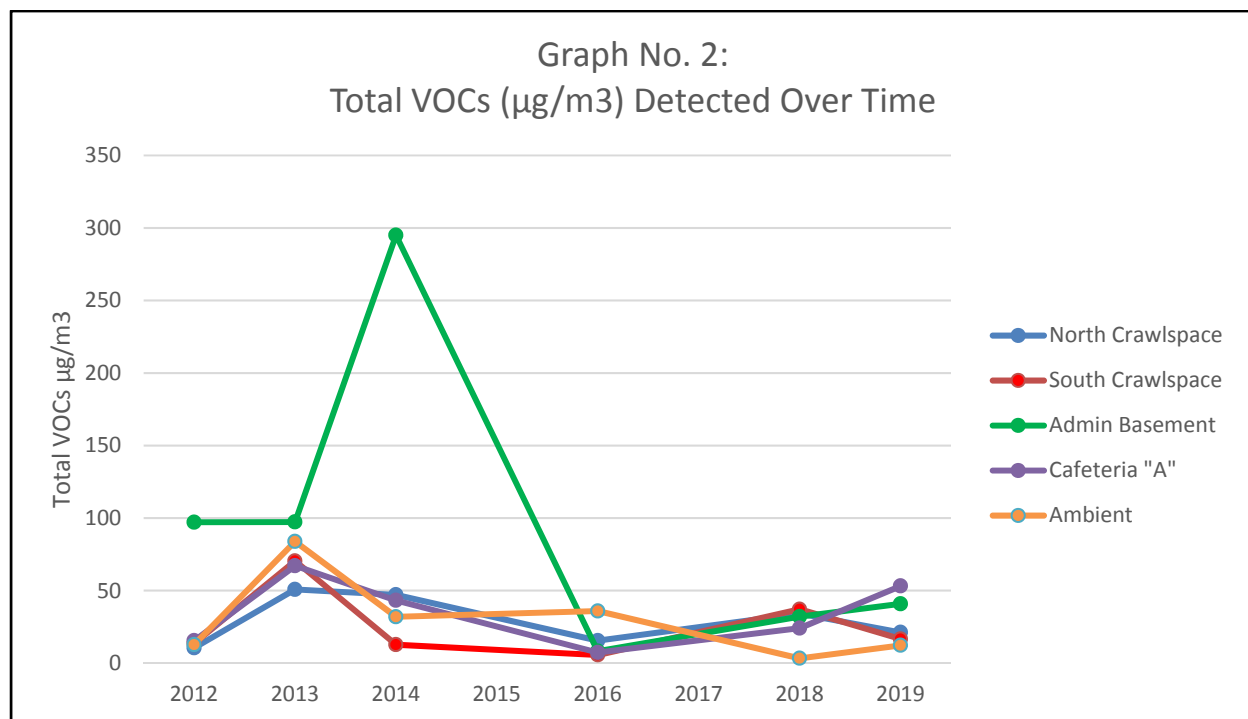
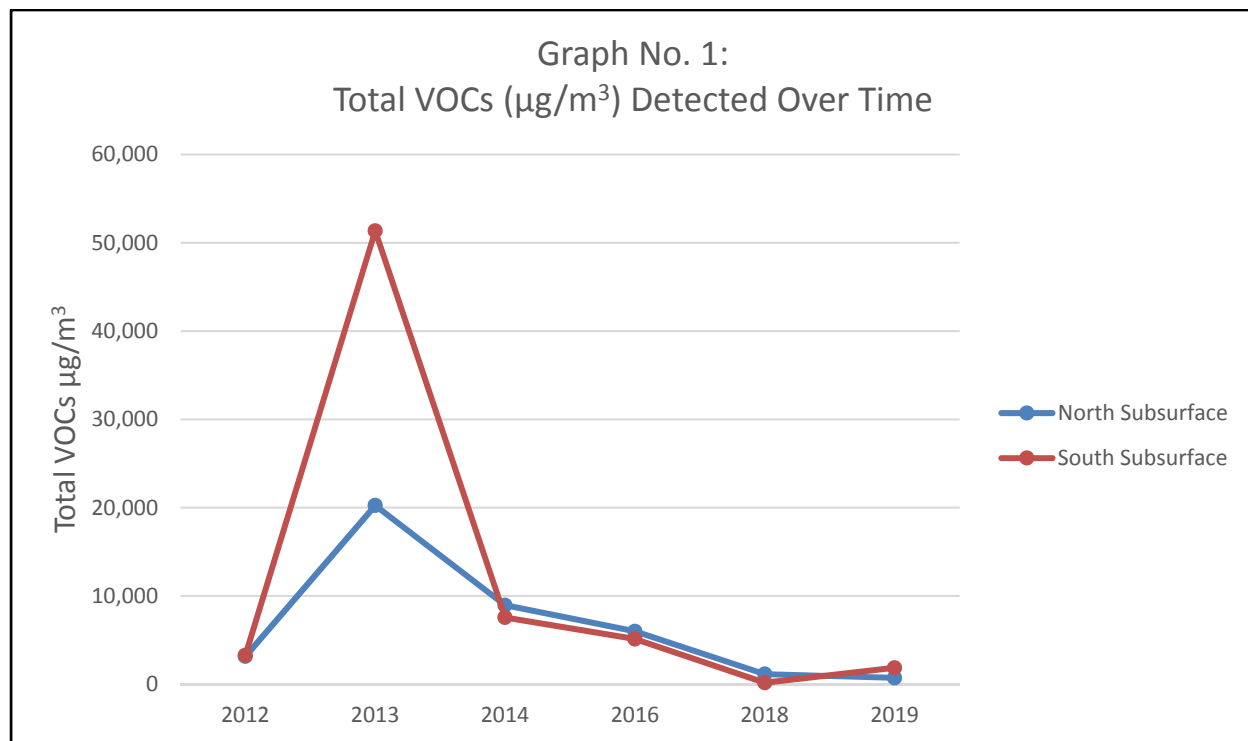
- Based upon these findings, no hazardous condition or immediate health concern was identified associated with VVI.

Section No. 7.1: Previous Analytical Results Trend Analysis

JCB has been performing the same volatile vapor intrusion sampling since 2012. The 2019 analytical results for total VOCs were compared to previous year's results and are presented below.

Table No. 3: Total VOCs (µg/m³) Detected Over Time						
Location	Year					
	2012	2013	2014	2016	2018	2019
North Subsurface	3,153	20,243	8,944	5,991	1,144	718
North Crawlspace	10.5	50.8	47.1	15.5	34.1	21.18
South Subsurface	3,269	51,353	7,558	5,121	169	1,860.6
South Crawlspace	13.6	70.4	12.7	5.6	37.1	16.57
Admin Basement	97.1	97.3	295	8.19	32	40.85
Cafeteria "A"	15.4	67.1	43.2	7.31	24.1	53.15
Ambient	12.7	83.8	31.93	35.9	3.28	12.25

In general, the concentration of total VOCs has decreased in the subsurface samples, below the plastic barrier since 2012 as indicated in Graph No. 1 below. In addition, the interior spaces indicated no significant changes in the detected total VOC concentration since 2012 as indicated in Graph No. 2 below.



Section No. 8.0: Conclusions

A careful evaluation of the indoor air sampling results compared to the subsurface and ambient results did reveal the presence of a discernible pattern suggesting that the building could be impacted with VVI. Coincidentally, it appears that the plastic barrier installed in the crawlspace of the building, although not its intended purpose has been relatively effective in preventing the subsurface volatile vapors from migrating into the crawlspace and occupied portions of the school building.

Section No. 9.0: Recommendations

It is recommended that periodic VVI sampling be performed to monitor site conditions.

An investigation should be performed to identify any possible sources of detected VOCs associated with building operations. Steps should be taken to reduce the presence of these parameters such as, keeping containers tightly capped or storing VOC containing products in ventilated areas.

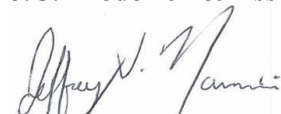
It is also recommended that periodic inspection of the plastic barrier be performed and that any rips or tears to the barrier be repaired.

Section No. 10.0: Certification

I certify that this Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", Final Version, October 2006 and all updates, and that all activities were performed in full accordance with the work plan.

Sincerely,

J.C. Broderick & Associates, Inc.



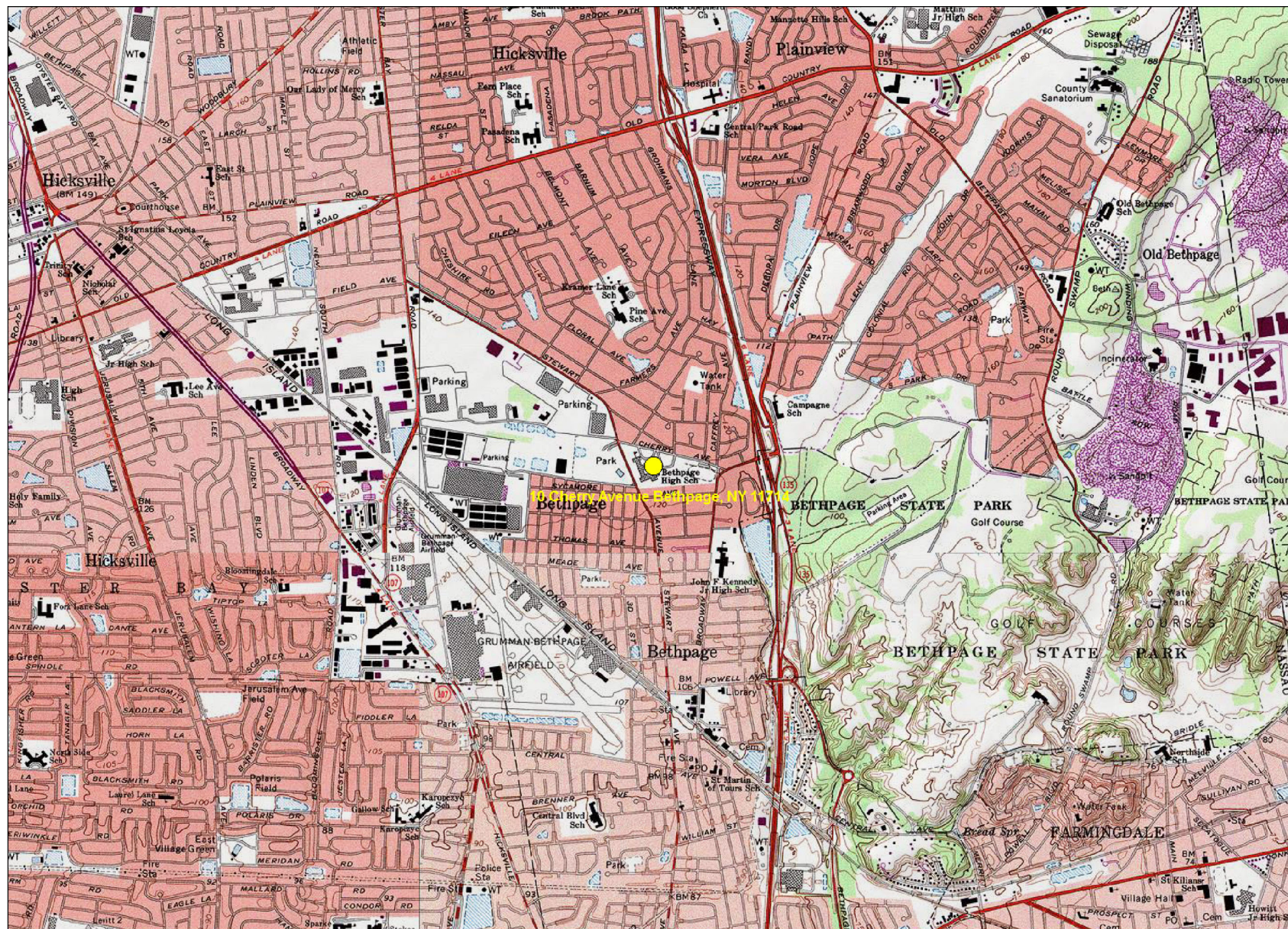
Jeffrey V. Nannini
Environmental Scientist



Steven Muller, P.G.
Project Manager

Appendix A

Figures



MN 14° TN

0 1000 FEET 0 500 1000 METERS
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

JCB LEGEND

● SUBJECT SITE



J.C. BRODERICK

& Associates

Environmental Consulting and
Testing

1775 Express Drive North

Hauppauge, NY 11788

Phone: (631).584.5492

Fax: (631).584.3395

Notes:

Bethpage High School
10 Cherry Avenue
Bethpage, NY 11714

Drawing Title

Figure No. 1

Site Location Map

Scale As Noted Project No. 19-42656 Date 02-21-19

Drawn By J.V.N. Checked By S.W.M. Page No. 1 of 3

Drawing No.

1



J.C. BRODERICK

& Associates

Environmental Consulting and
Testing

1775 Express Drive North
Hauppauge, New York 11788

Phone: (631).584.5492

Fax: (631).584.3395

Notes:

Bethpage High School
10 Cherry Avenue
Bethpage, NY 11714

Drawing Title

Figure No. 2

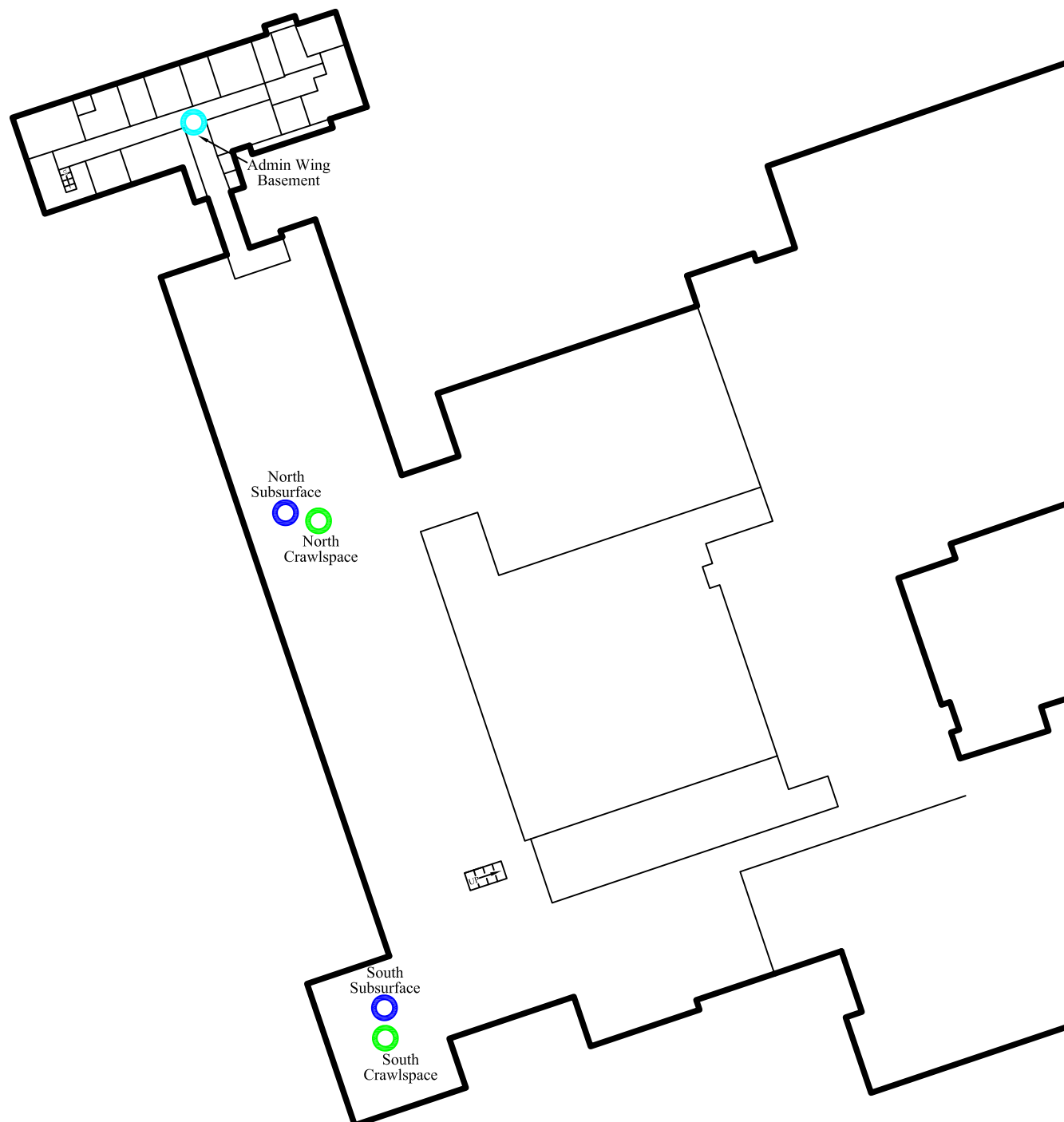
Subsurface,
Crawlspace and
Basement
Sampling
Locations

Scale	Project No.	Date
N.T.S.	19-42656	02-21-19

Drawn By	Checked By	Page No.
J.V.N.	S.W.M.	2 of 3

Drawing No.

2



JCB LEGEND

- SUBSURFACE SAMPLING LOCATION
- CRAWLSPACE SAMPLING LOCATION
- BASEMENT SAMPLING LOCATION



J.C. BRODERICK

& Associates
Environmental Consulting and
Testing
1775 Express Drive North
Hauppauge, New York 11788
Phone: (631).584.5492
Fax: (631).584.3395

Notes:

Bethpage High School
10 Cherry Avenue
Bethpage, NY 11714

Drawing Title

Figure No. 3

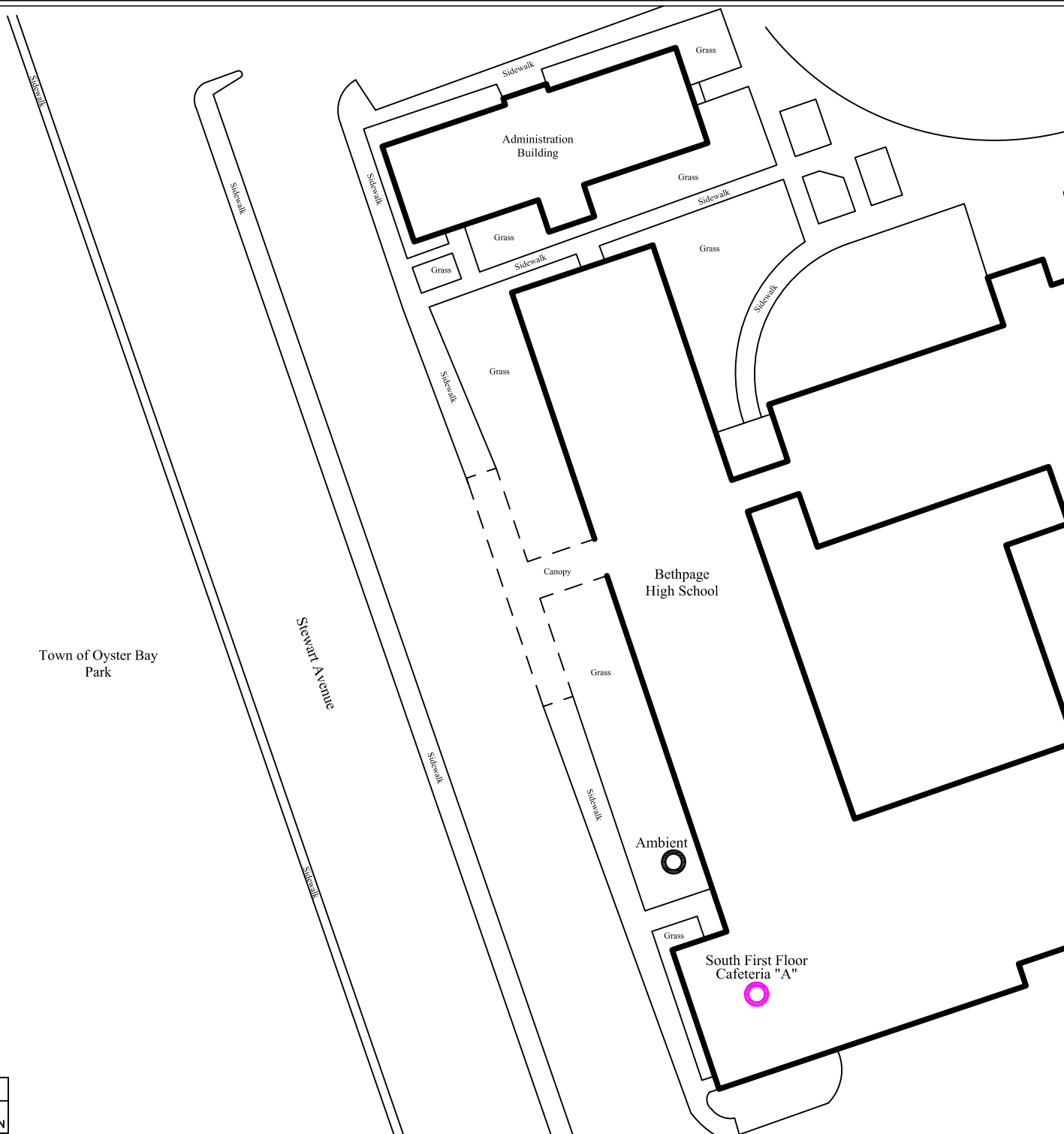
1st Floor
and
Ambient
Sampling
Locations

Scale	Project No.	Date
N.T.S.	19-42656	02-21-19

Drawn By	Checked By	Page No.
J.V.N.	S.W.M.	3 of 3

Drawing No.

3



JCB LEGEND

● AMBIENT SAMPLING LOCATION
● 1ST FLOOR SAMPLING LOCATION

Appendix B

Field Photograph Logs

**Sampling Location
South Crawlspace and South Subsurface**



Field Photograph Log

Volatile Vapor Intrusion Report

**Bethpage High School
10 Cherry Avenue
Bethpage, New York 11714**

Photo No. 01

JCB#: 19-42656

**Sampling Location
North Crawlspace and North Subsurface**



Field Photograph Log

Volatile Vapor Intrusion Report

**Bethpage High School
10 Cherry Avenue
Bethpage, New York 11714**

Photo No. 02

JCB#: 19-42656

**Sampling Location
Administration Wing Basement**



Field Photograph Log

Volatile Vapor Intrusion Report

**Bethpage High School
10 Cherry Avenue
Bethpage, New York 11714**

Photo No. 03

JCB#: 19-42656

**Sampling Location
South First Floor Cafeteria "A"**



Field Photograph Log

Volatile Vapor Intrusion Report

**Bethpage High School
10 Cherry Avenue
Bethpage, New York 11714**

Photo No. 04

JCB#: 19-42656

**Sampling Location
Ambient (Outdoor)**



Field Photograph Log

Volatile Vapor Intrusion Report

**Bethpage High School
10 Cherry Avenue
Bethpage, New York 11714**

Photo No. 05

JCB#: 19-42656

Appendix C

Laboratory Analysis Report



Technical Report

prepared for:

J.C. Broderick
1775 North Express Drive
Hauppauge NY, 11788
Attention: Steven Muller

Report Date: 03/05/2019
Client Project ID: 19-42656
York Project (SDG) No.: 19B0830

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: 03/05/2019
Client Project ID: 19-42656
York Project (SDG) No.: 19B0830

J.C. Broderick
1775 North Express Drive
Hauppauge NY, 11788
Attention: Steven Muller

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 February 25, 2019 with a temperature of C. The project was identified as your project: **19-42656**.

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>
19B0830-01	South Subsurface	Soil Vapor	02/21/2019	02/25/2019
19B0830-02	South Crawlspace	Indoor Ambient Air	02/21/2019	02/25/2019
19B0830-03	North Subsurface	Soil Vapor	02/21/2019	02/25/2019
19B0830-04	North Crawlspace	Indoor Ambient Air	02/21/2019	02/25/2019
19B0830-05	Admin Wing Basement	Indoor Ambient Air	02/21/2019	02/25/2019
19B0830-06	South 1st Floor Cafe "A"	Indoor Ambient Air	02/21/2019	02/25/2019
19B0830-07	Ambient	Outdoor Ambient Ai	02/21/2019	02/25/2019

General Notes for York Project (SDG) No.: 19B0830

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: 03/05/2019





Sample Information

Client Sample ID: South Subsurface

York Sample ID: 19B0830-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19B0830

19-42656

Soil Vapor

February 21, 2019 12:00 am

02/25/2019

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		ug/m ³	11	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	8.9	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	11	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	13	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	8.9	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	6.6	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	1.6	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	12	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	8.0	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	13	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	9.8	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	6.6	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	7.6	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	11	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	8.0	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	11	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	9.8	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	7.6	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	9.8	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	12	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
78-93-3	2-Butanone	22		ug/m ³	4.8	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS



Sample Information

Client Sample ID: South Subsurface

York Sample ID: 19B0830-01

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Soil Vapor

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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	13	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
107-05-1	3-Chloropropene	ND		ug/m ³	26	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	6.7	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
67-64-1	Acetone	330		ug/m ³	7.8	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
107-13-1	Acrylonitrile	ND		ug/m ³	3.5	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
71-43-2	Benzene	5.2		ug/m ³	5.2	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
100-44-7	Benzyl chloride	ND		ug/m ³	8.5	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	11	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-25-2	Bromoform	ND		ug/m ³	17	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
74-83-9	Bromomethane	ND		ug/m ³	6.3	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-15-0	Carbon disulfide	ND		ug/m ³	5.1	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
56-23-5	Carbon tetrachloride	ND		ug/m ³	2.6	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
108-90-7	Chlorobenzene	ND		ug/m ³	7.5	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-00-3	Chloroethane	ND		ug/m ³	4.3	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
67-66-3	Chloroform	ND		ug/m ³	8.0	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
74-87-3	Chloromethane	ND		ug/m ³	3.4	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	1.6	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	7.4	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
110-82-7	Cyclohexane	ND		ug/m ³	5.6	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	14	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-71-8	Dichlorodifluoromethane	ND		ug/m ³	8.1	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
141-78-6	* Ethyl acetate	ND		ug/m ³	12	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS



Sample Information

Client Sample ID: South Subsurface

York Sample ID: 19B0830-01

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Soil Vapor

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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	24		ug/m ³	7.1	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
87-68-3	Hexachlorobutadiene	ND		ug/m ³	17	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
67-63-0	Isopropanol	ND		ug/m ³	8.0	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	6.7	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	5.9	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-09-2	Methylene chloride	ND		ug/m ³	11	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
142-82-5	n-Heptane	ND		ug/m ³	6.7	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
110-54-3	n-Hexane	8.6		ug/m ³	5.8	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
95-47-6	o-Xylene	7.8		ug/m ³	7.1	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
179601-23-1	p- & m- Xylenes	26		ug/m ³	14	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
622-96-8	* p-Ethyltoluene	ND		ug/m ³	8.0	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
115-07-1	* Propylene	ND		ug/m ³	2.8	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
100-42-5	Styrene	ND		ug/m ³	7.0	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
127-18-4	Tetrachloroethylene	ND		ug/m ³	2.8	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
109-99-9	* Tetrahydrofuran	37		ug/m ³	9.6	16.34	EPA TO-15 Certifications:	02/27/2019 08:00	02/27/2019 23:19	AS
108-88-3	Toluene	1400		ug/m ³	6.2	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	6.5	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	7.4	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
79-01-6	Trichloroethylene	ND		ug/m ³	2.2	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m ³	9.2	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
108-05-4	Vinyl acetate	ND		ug/m ³	5.8	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
593-60-2	Vinyl bromide	ND		ug/m ³	7.1	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS



Sample Information

Client Sample ID: South Subsurface

York Sample ID: 19B0830-01

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Soil Vapor

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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	1.0	16.34	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/27/2019 23:19	AS
Surrogate Recoveries		Result		Acceptance Range						
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	98.4 %				70-130				

Helium

Log-in Notes:

Sample Notes:

Sample Prepared by Method: PREP for GASES by GC

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-59-7	* Helium	ND		%	0.82	1.634	GC/TCD Certifications:	03/05/2019 14:49	03/05/2019 15:12	RB/

Sample Information

Client Sample ID: South Crawlspace

York Sample ID: 19B0830-02

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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		ug/m ³	0.64	0.936	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 00:17	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.51	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.64	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	0.72	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.51	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.38	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.093	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.69	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS



Sample Information

Client Sample ID: South Crawlspace

York Sample ID: 19B0830-02

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.46	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.72	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.56	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.38	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.43	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.65	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.46	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.62	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.56	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.43	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.56	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.67	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
78-93-3	2-Butanone	0.86		ug/m ³	0.28	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	0.77	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
107-05-1	3-Chloropropene	ND		ug/m ³	1.5	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.38	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
67-64-1	Acetone	5.8		ug/m ³	0.44	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.20	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
71-43-2	Benzene	0.66		ug/m ³	0.30	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
100-44-7	Benzyl chloride	ND		ug/m ³	0.48	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.63	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-25-2	Bromoform	ND		ug/m ³	0.97	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS



Sample Information

Client Sample ID: South Crawlspace

York Sample ID: 19B0830-02

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
74-83-9	Bromomethane	ND		ug/m ³	0.36	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-15-0	Carbon disulfide	ND		ug/m ³	0.29	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
56-23-5	Carbon tetrachloride	0.47		ug/m ³	0.15	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
108-90-7	Chlorobenzene	ND		ug/m ³	0.43	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-00-3	Chloroethane	ND		ug/m ³	0.25	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
67-66-3	Chloroform	ND		ug/m ³	0.46	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
74-87-3	Chloromethane	1.1		ug/m ³	0.19	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.093	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.42	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
110-82-7	Cyclohexane	ND		ug/m ³	0.32	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	0.80	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-71-8	Dichlorodifluoromethane	1.8		ug/m ³	0.46	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
141-78-6	* Ethyl acetate	ND		ug/m ³	0.67	0.936	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 00:17	AS
100-41-4	Ethyl Benzene	ND		ug/m ³	0.41	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
87-68-3	Hexachlorobutadiene	ND		ug/m ³	1.0	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
67-63-0	Isopropanol	1.1		ug/m ³	0.46	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.38	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.34	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-09-2	Methylene chloride	0.65		ug/m ³	0.65	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
142-82-5	n-Heptane	ND		ug/m ³	0.38	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
110-54-3	n-Hexane	0.43		ug/m ³	0.33	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
95-47-6	o-Xylene	ND		ug/m ³	0.41	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS



Sample Information

Client Sample ID: South Crawlspace

York Sample ID: 19B0830-02

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
179601-23-1	p- & m- Xylenes	ND		ug/m ³	0.81	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
622-96-8	* p-Ethyltoluene	ND		ug/m ³	0.46	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
115-07-1	* Propylene	ND		ug/m ³	0.16	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
100-42-5	Styrene	ND		ug/m ³	0.40	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
127-18-4	Tetrachloroethylene	ND		ug/m ³	0.16	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
109-99-9	* Tetrahydrofuran	ND		ug/m ³	0.55	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
108-88-3	Toluene	2.3		ug/m ³	0.35	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.37	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.42	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
79-01-6	Trichloroethylene	ND		ug/m ³	0.13	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-69-4	Trichlorofluoromethane (Freon 11)	1.4		ug/m ³	0.53	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
108-05-4	Vinyl acetate	ND		ug/m ³	0.33	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
593-60-2	Vinyl bromide	ND		ug/m ³	0.41	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.060	0.936	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 00:17	AS
460-00-4	Surrogate Recoveries <i>Surrogate: SURR: p-Bromofluorobenzene</i>	Result 101 %		Acceptance Range 70-130						

Sample Information

Client Sample ID: North Subsurface

York Sample ID: 19B0830-03

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Soil Vapor

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019



Sample Information

Client Sample ID: North Subsurface

York Sample ID: 19B0830-03

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Soil Vapor

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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		ug/m ³	2.2	3.178	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 17:36	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	1.7	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	2.2	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	2.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	1.7	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	1.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.32	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	2.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
95-63-6	1,2,4-Trimethylbenzene	4.2		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	2.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	1.9	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	1.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	1.5	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	2.2	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
108-67-8	1,3,5-Trimethylbenzene	1.6		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	2.1	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	1.9	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	1.5	3.178	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 17:36	AS
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	1.9	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	2.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
78-93-3	2-Butanone	9.7		ug/m ³	0.94	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	2.6	3.178	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 17:36	AS



Sample Information

Client Sample ID: North Subsurface

York Sample ID: 19B0830-03

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Soil Vapor

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
107-05-1	3-Chloropropene	ND		ug/m ³	5.0	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
108-10-1	4-Methyl-2-pentanone	1.4		ug/m ³	1.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
67-64-1	Acetone	290		ug/m ³	1.5	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.69	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
71-43-2	Benzene	3.1		ug/m ³	1.0	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
100-44-7	Benzyl chloride	ND		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	2.1	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-25-2	Bromoform	ND		ug/m ³	3.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
74-83-9	Bromomethane	ND		ug/m ³	1.2	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-15-0	Carbon disulfide	ND		ug/m ³	0.99	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
56-23-5	Carbon tetrachloride	0.60		ug/m ³	0.50	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
108-90-7	Chlorobenzene	ND		ug/m ³	1.5	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-00-3	Chloroethane	ND		ug/m ³	0.84	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
67-66-3	Chloroform	ND		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
74-87-3	Chloromethane	ND		ug/m ³	0.66	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.32	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	1.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
110-82-7	Cyclohexane	1.9		ug/m ³	1.1	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	2.7	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-71-8	Dichlorodifluoromethane	2.5		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
141-78-6	* Ethyl acetate	ND		ug/m ³	2.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
100-41-4	Ethyl Benzene	5.2		ug/m ³	1.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS



Sample Information

Client Sample ID: North Subsurface

York Sample ID: 19B0830-03

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Soil Vapor

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
87-68-3	Hexachlorobutadiene	ND		ug/m ³	3.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
67-63-0	Isopropanol	8.4		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	1.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	1.1	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-09-2	Methylene chloride	ND		ug/m ³	2.2	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
142-82-5	n-Heptane	5.7		ug/m ³	1.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
110-54-3	n-Hexane	4.6		ug/m ³	1.1	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
95-47-6	o-Xylene	4.7		ug/m ³	1.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
179601-23-1	p- & m- Xylenes	12		ug/m ³	2.8	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
622-96-8	* p-Ethyltoluene	3.9		ug/m ³	1.6	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
115-07-1	* Propylene	ND		ug/m ³	0.55	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
100-42-5	Styrene	ND		ug/m ³	1.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
127-18-4	Tetrachloroethylene	ND		ug/m ³	0.54	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
109-99-9	* Tetrahydrofuran	18		ug/m ³	1.9	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
108-88-3	Toluene	340		ug/m ³	1.2	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	1.3	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	1.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
79-01-6	Trichloroethylene	ND		ug/m ³	0.43	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m ³	1.8	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
108-05-4	Vinyl acetate	ND		ug/m ³	1.1	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
593-60-2	Vinyl bromide	ND		ug/m ³	1.4	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.20	3.178	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 17:36	AS



Sample Information

Client Sample ID: North Subsurface

York Sample ID: 19B0830-03

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Soil Vapor

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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
Surrogate Recoveries		Result		Acceptance Range						
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	101 %		70-130						

Helium

Log-in Notes:

Sample Notes:

Sample Prepared by Method: PREP for GASES by GC

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-59-7	* Helium	ND		%	0.79	1.589	GC/TCD Certifications:	03/05/2019 14:49	03/05/2019 15:16	RB/

Sample Information

Client Sample ID: North Crawlspace

York Sample ID: 19B0830-04

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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		ug/m ³	0.58	0.844	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 02:01	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.46	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.58	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	0.65	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.46	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.34	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.084	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.63	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.41	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS



Sample Information

Client Sample ID: North Crawlspace

York Sample ID: 19B0830-04

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.65	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.51	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.34	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.39	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.59	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.41	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.56	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.51	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.39	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.51	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.61	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
78-93-3	2-Butanone	0.92		ug/m ³	0.25	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	0.69	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
107-05-1	3-Chloropropene	ND		ug/m ³	1.3	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.35	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
67-64-1	Acetone	7.3		ug/m ³	0.40	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.18	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
71-43-2	Benzene	0.65		ug/m ³	0.27	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
100-44-7	Benzyl chloride	ND		ug/m ³	0.44	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.57	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-25-2	Bromoform	ND		ug/m ³	0.87	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
74-83-9	Bromomethane	ND		ug/m ³	0.33	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS



Sample Information

Client Sample ID: North Crawlspace

York Sample ID: 19B0830-04

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
75-15-0	Carbon disulfide	ND		ug/m ³	0.26	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
56-23-5	Carbon tetrachloride	0.42		ug/m ³	0.13	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
108-90-7	Chlorobenzene	ND		ug/m ³	0.39	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-00-3	Chloroethane	ND		ug/m ³	0.22	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
67-66-3	Chloroform	ND		ug/m ³	0.41	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
74-87-3	Chloromethane	1.2		ug/m ³	0.17	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.084	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.38	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
110-82-7	Cyclohexane	ND		ug/m ³	0.29	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	0.72	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-71-8	Dichlorodifluoromethane	1.8		ug/m ³	0.42	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
141-78-6	* Ethyl acetate	ND		ug/m ³	0.61	0.844	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 02:01	AS
100-41-4	Ethyl Benzene	0.40		ug/m ³	0.37	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
87-68-3	Hexachlorobutadiene	ND		ug/m ³	0.90	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
67-63-0	Isopropanol	1.5		ug/m ³	0.41	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.35	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.30	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-09-2	Methylene chloride	0.79		ug/m ³	0.59	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
142-82-5	n-Heptane	ND		ug/m ³	0.35	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
110-54-3	n-Hexane	0.39		ug/m ³	0.30	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
95-47-6	o-Xylene	ND		ug/m ³	0.37	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
179601-23-1	p- & m- Xylenes	0.81		ug/m ³	0.73	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS



Sample Information

Client Sample ID: North Crawlspace

York Sample ID: 19B0830-04

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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
622-96-8	* p-Ethyltoluene	ND		ug/m ³	0.41	0.844	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 02:01	AS
115-07-1	* Propylene	ND		ug/m ³	0.15	0.844	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 02:01	AS
100-42-5	Styrene	ND		ug/m ³	0.36	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
127-18-4	Tetrachloroethylene	ND		ug/m ³	0.14	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
109-99-9	* Tetrahydrofuran	ND		ug/m ³	0.50	0.844	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 02:01	AS
108-88-3	Toluene	2.2		ug/m ³	0.32	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.33	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.38	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
79-01-6	Trichloroethylene	ND		ug/m ³	0.11	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-69-4	Trichlorofluoromethane (Freon 11)	1.4		ug/m ³	0.47	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
108-05-4	Vinyl acetate	1.4		ug/m ³	0.30	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
593-60-2	Vinyl bromide	ND		ug/m ³	0.37	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.054	0.844	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:01	AS
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	102 %	70-130							

Sample Information

Client Sample ID: Admin Wing Basement

York Sample ID: 19B0830-05

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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		ug/m ³	0.56	0.81	EPA TO-15 Certifications:	02/27/2019 08:00	02/28/2019 02:59	AS



Sample Information

Client Sample ID: Admin Wing Basement

York Sample ID: 19B0830-05

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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
71-55-6	1,1,1-Trichloroethane	0.93		ug/m ³	0.44	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.56	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	0.62	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.44	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.33	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.080	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.60	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
95-63-6	1,2,4-Trimethylbenzene	0.44		ug/m ³	0.40	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.62	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.49	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.33	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.37	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.57	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.40	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.54	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.49	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.37	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.49	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.58	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
78-93-3	2-Butanone	2.2		ug/m ³	0.24	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	0.66	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
107-05-1	3-Chloropropene	ND		ug/m ³	1.3	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS



Sample Information

Client Sample ID: Admin Wing Basement

York Sample ID: 19B0830-05

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.33	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
67-64-1	Acetone	12		ug/m ³	0.38	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.18	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
71-43-2	Benzene	0.70		ug/m ³	0.26	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
100-44-7	Benzyl chloride	ND		ug/m ³	0.42	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.54	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-25-2	Bromoform	ND		ug/m ³	0.84	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
74-83-9	Bromomethane	ND		ug/m ³	0.31	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-15-0	Carbon disulfide	ND		ug/m ³	0.25	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
56-23-5	Carbon tetrachloride	0.46		ug/m ³	0.13	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
108-90-7	Chlorobenzene	ND		ug/m ³	0.37	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-00-3	Chloroethane	ND		ug/m ³	0.21	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
67-66-3	Chloroform	ND		ug/m ³	0.40	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
74-87-3	Chloromethane	1.2		ug/m ³	0.17	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.080	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.37	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
110-82-7	Cyclohexane	0.84		ug/m ³	0.28	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	0.69	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-71-8	Dichlorodifluoromethane	1.8		ug/m ³	0.40	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
141-78-6	* Ethyl acetate	0.82		ug/m ³	0.58	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
100-41-4	Ethyl Benzene	1.4		ug/m ³	0.35	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
87-68-3	Hexachlorobutadiene	ND		ug/m ³	0.86	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS



Sample Information

Client Sample ID: Admin Wing Basement

York Sample ID: 19B0830-05

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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
67-63-0	Isopropanol	5.2		ug/m ³	0.40	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.33	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.29	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-09-2	Methylene chloride	1.5		ug/m ³	0.56	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
142-82-5	n-Heptane	ND		ug/m ³	0.33	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
110-54-3	n-Hexane	0.40		ug/m ³	0.29	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
95-47-6	o-Xylene	0.42		ug/m ³	0.35	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
179601-23-1	p- & m- Xylenes	1.1		ug/m ³	0.70	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
622-96-8	* p-Ethyltoluene	0.44		ug/m ³	0.40	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
115-07-1	* Propylene	ND		ug/m ³	0.14	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
100-42-5	Styrene	1.2		ug/m ³	0.35	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
127-18-4	Tetrachloroethylene	ND		ug/m ³	0.14	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
109-99-9	* Tetrahydrofuran	ND		ug/m ³	0.48	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
108-88-3	Toluene	6.3		ug/m ³	0.31	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.32	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.37	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
79-01-6	Trichloroethylene	ND		ug/m ³	0.11	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-69-4	Trichlorofluoromethane (Freon 11)	1.5		ug/m ³	0.46	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
108-05-4	Vinyl acetate	ND		ug/m ³	0.29	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
593-60-2	Vinyl bromide	ND		ug/m ³	0.35	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.052	0.81	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/27/2019 08:00	02/28/2019 02:59	AS
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	105 %	70-130							



Sample Information

Client Sample ID: Admin Wing Basement

York Sample ID: 19B0830-05

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

Sample Information

Client Sample ID: South 1st Floor Cafe "A"

York Sample ID: 19B0830-06

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes: TO-VAC

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		ug/m ³	0.51	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.41	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.51	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1.4		ug/m ³	0.57	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
79-00-5	1,1,2-Trichloroethane	0.65		ug/m ³	0.41	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.30	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
75-35-4	1,1-Dichloroethylene	0.44		ug/m ³	0.074	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.55	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
95-63-6	1,2,4-Trimethylbenzene	1.2		ug/m ³	0.37	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.57	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
95-50-1	1,2-Dichlorobenzene	0.90		ug/m ³	0.45	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.30	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.35	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.52	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
108-67-8	1,3,5-Trimethylbenzene	0.62		ug/m ³	0.37	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.50	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
541-73-1	1,3-Dichlorobenzene	0.85		ug/m ³	0.45	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
142-28-9	* 1,3-Dichloropropane	0.55		ug/m ³	0.35	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS



Sample Information

Client Sample ID: South 1st Floor Cafe "A"

York Sample ID: 19B0830-06

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes: TO-VAC

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
106-46-7	1,4-Dichlorobenzene	0.90		ug/m ³	0.45	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.54	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
78-93-3	2-Butanone	1.6		ug/m ³	0.22	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	0.61	0.747	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 20:03	AS
107-05-1	3-Chloropropene	ND		ug/m ³	1.2	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
108-10-1	4-Methyl-2-pentanone	0.80		ug/m ³	0.31	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
67-64-1	Acetone	7.9		ug/m ³	0.35	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.16	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
71-43-2	Benzene	1.2		ug/m ³	0.24	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
100-44-7	Benzyl chloride	ND		ug/m ³	0.39	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.50	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-25-2	Bromoform	ND		ug/m ³	0.77	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
74-83-9	Bromomethane	ND		ug/m ³	0.29	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-15-0	Carbon disulfide	ND		ug/m ³	0.23	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
56-23-5	Carbon tetrachloride	1.2		ug/m ³	0.12	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
108-90-7	Chlorobenzene	0.58		ug/m ³	0.34	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-00-3	Chloroethane	ND		ug/m ³	0.20	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
67-66-3	Chloroform	ND		ug/m ³	0.36	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
74-87-3	Chloromethane	1.4		ug/m ³	0.15	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
156-59-2	cis-1,2-Dichloroethylene	0.44		ug/m ³	0.074	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.34	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
110-82-7	Cyclohexane	0.64		ug/m ³	0.26	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS



Sample Information

Client Sample ID: South 1st Floor Cafe "A"

York Sample ID: 19B0830-06

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Indoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes: TO-VAC

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
124-48-1	Dibromochloromethane	ND		ug/m ³	0.64	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-71-8	Dichlorodifluoromethane	2.1		ug/m ³	0.37	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
141-78-6	* Ethyl acetate	1.2		ug/m ³	0.54	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
100-41-4	Ethyl Benzene	1.0		ug/m ³	0.32	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
87-68-3	Hexachlorobutadiene	2.2		ug/m ³	0.80	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
67-63-0	Isopropanol	2.4		ug/m ³	0.37	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
80-62-6	Methyl Methacrylate	0.67		ug/m ³	0.31	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.27	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-09-2	Methylene chloride	2.6		ug/m ³	0.52	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
142-82-5	n-Heptane	0.86		ug/m ³	0.31	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
110-54-3	n-Hexane	1.1		ug/m ³	0.26	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
95-47-6	o-Xylene	1.1		ug/m ³	0.32	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
179601-23-1	p- & m- Xylenes	2.8		ug/m ³	0.65	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
622-96-8	* p-Ethyltoluene	1.2		ug/m ³	0.37	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
115-07-1	* Propylene	ND		ug/m ³	0.13	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
100-42-5	Styrene	0.83		ug/m ³	0.32	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
127-18-4	Tetrachloroethylene	1.4		ug/m ³	0.13	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
109-99-9	* Tetrahydrofuran	0.66		ug/m ³	0.44	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
108-88-3	Toluene	4.5		ug/m ³	0.28	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.30	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.34	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
79-01-6	Trichloroethylene	0.64		ug/m ³	0.10	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-69-4	Trichlorofluoromethane (Freon 11)	2.2		ug/m ³	0.42	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS



Sample Information

Client Sample ID: South 1st Floor Cafe "A"

York Sample ID: 19B0830-06

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Indoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes: TO-VAC

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
108-05-4	Vinyl acetate	0.42		ug/m ³	0.26	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
593-60-2	Vinyl bromide	ND		ug/m ³	0.33	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.048	0.747	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 20:03	AS
	Surrogate Recoveries	Result					Acceptance Range			
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	100 %					70-130			

Sample Information

Client Sample ID: Ambient

York Sample ID: 19B0830-07

York Project (SDG) No.

19B0830

Client Project ID

19-42656

Matrix

Outdoor Ambient Air

Collection Date/Time

February 21, 2019 12:00 am

Date Received

02/25/2019

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		ug/m ³	0.54	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.43	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.54	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	0.60	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.43	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.32	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.078	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.58	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.38	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.60	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS



Sample Information

Client Sample ID: Ambient

York Sample ID: 19B0830-07

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Outdoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.47	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.32	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.36	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.55	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.38	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	0.52	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.47	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.36	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.47	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	0.56	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
78-93-3	2-Butanone	0.85		ug/m ³	0.23	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	0.64	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
107-05-1	3-Chloropropene	ND		ug/m ³	1.2	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.32	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
67-64-1	Acetone	3.7		ug/m ³	0.37	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.17	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
71-43-2	Benzene	0.67		ug/m ³	0.25	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
100-44-7	Benzyl chloride	ND		ug/m ³	0.40	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	0.52	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-25-2	Bromoform	ND		ug/m ³	0.81	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
74-83-9	Bromomethane	ND		ug/m ³	0.30	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-15-0	Carbon disulfide	ND		ug/m ³	0.24	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS



Sample Information

Client Sample ID: Ambient

York Sample ID: 19B0830-07

York Project (SDG) No.
19B0830

Client Project ID
19-42656

Matrix
Outdoor Ambient Air

Collection Date/Time
February 21, 2019 12:00 am

Date Received
02/25/2019

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
56-23-5	Carbon tetrachloride	0.44		ug/m ³	0.12	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
108-90-7	Chlorobenzene	ND		ug/m ³	0.36	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-00-3	Chloroethane	ND		ug/m ³	0.21	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
67-66-3	Chloroform	ND		ug/m ³	0.38	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
74-87-3	Chloromethane	1.0		ug/m ³	0.16	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.078	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.35	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
110-82-7	Cyclohexane	ND		ug/m ³	0.27	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	0.67	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-71-8	Dichlorodifluoromethane	1.6		ug/m ³	0.39	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
141-78-6	* Ethyl acetate	ND		ug/m ³	0.56	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
100-41-4	Ethyl Benzene	ND		ug/m ³	0.34	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
87-68-3	Hexachlorobutadiene	ND		ug/m ³	0.83	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
67-63-0	Isopropanol	0.71		ug/m ³	0.38	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.32	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.28	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
75-09-2	Methylene chloride	0.62		ug/m ³	0.54	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
142-82-5	n-Heptane	ND		ug/m ³	0.32	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
110-54-3	n-Hexane	0.36		ug/m ³	0.28	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
95-47-6	o-Xylene	ND		ug/m ³	0.34	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
179601-23-1	p- & m- Xylenes	ND		ug/m ³	0.68	0.782	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	02/28/2019 08:00	02/28/2019 21:01	AS
622-96-8	* p-Ethyltoluene	ND		ug/m ³	0.38	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS



Sample Information

Client Sample ID: Ambient

York Sample ID: 19B0830-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19B0830

19-42656

Outdoor Ambient Air

February 21, 2019 12:00 am

02/25/2019

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
115-07-1	* Propylene	ND		ug/m ³	0.13	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
100-42-5	Styrene	ND		ug/m ³	0.33	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
127-18-4	Tetrachloroethylene	ND		ug/m ³	0.13	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
109-99-9	* Tetrahydrofuran	ND		ug/m ³	0.46	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
108-88-3	Toluene	1.1		ug/m ³	0.29	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.31	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.35	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
79-01-6	Trichloroethylene	ND		ug/m ³	0.11	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
75-69-4	Trichlorofluoromethane (Freon 11)	1.2		ug/m ³	0.44	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
108-05-4	Vinyl acetate	ND		ug/m ³	0.28	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
593-60-2	Vinyl bromide	ND		ug/m ³	0.34	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.050	0.782	EPA TO-15 Certifications:	02/28/2019 08:00	02/28/2019 21:01	AS
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	99.6 %	70-130							





Sample and Data Qualifiers Relating to This Work Order

TO-VAC	The final vacuum in the canister was less than -2 inches Hg vacuum. The time integrated sampling may be affected and not reflect proper sampling over the time period. The data user should take note.
TO-LCS-H	The result reported for this compound may be biased high due to its behavior in the analysis batch LCS where it recovered greater than 130% of the expected value.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.

Definitions and Other Explanations

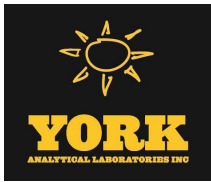
*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration 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 Analytical Laboratories, Inc.
120 Research Drive 132-02 89th Ave Queens,
Stratford, CT 06615 NY 11418

Field Chain-of-Custody Record - AIR

YORK Project No.
19B0830

YORK
ANALYTICAL LABORATORIES INC.

clientservices@yorklab.com
www.yorklab.com

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: <u>Exhaustech Associates, Inc.</u>	Company: <u>SCB</u>	Company: <u>SCB</u>	19-42656		RUSH - Next Day		
Address: <u>1755 Express Dr. W</u>	Address:	Address:	YOUR Project Name		RUSH - Two Day		
<u>Hawthorne, NY 11753</u>			<u>BiPhase H.S.</u>		RUSH - Three Day		
Phone: <u>631-584-5442</u>	Phone:	Phone:			RUSH - Four Day		
Contact: <u>Steven Miller</u>	Contact:	Contact:	YOUR PO#:		Standard (5-7 Day) <input checked="" type="checkbox"/>		
E-mail: <u>Smiller@Exhaustech.com</u>	E-mail:	E-mail:					
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.		Air Matrix Codes	Samples From	Report / EDD Type (circle selections)			YORK Reg. Comp.
		AI - Indoor Ambient Air	New York	<input checked="" type="checkbox"/> Summary Report	CT RCP	Standard Excel EDD	Compared to the following Regulation(s): (please fill in)
AO - Outdoor Amb. Air	New Jersey	<input type="checkbox"/> QA Report	CT RCP DQA/DUE	EquiS (Standard)			
AE - Vapor Extraction Well/ Process Gas/Effluent	Connecticut	<input type="checkbox"/> NY ASP A Package	NJDEP Reduced Deliv.	NYSDEC EquiS			
AS - Soil Vapor/Sub-Slab	Pennsylvania	<input type="checkbox"/> NY ASP B Package	NJDQKP	NJDEP SRP HazSite			
Other:							
Samples Collected by (print your name above and sign below) <u>Settling Nasser</u> <u>Settling Nasser</u>							
Certified Canisters: Batch <u> </u> Individual <u> </u>		Please enter the following REQUIRED Field Data					Reporting Units: ug/m ³ <input checked="" type="checkbox"/> ppbv <u> </u> ppmv <u> </u>
Sample Identification	Date/Time Sampled	Air Matrix	Canister Vacuum Before Sampling (in Hg)	Canister Vacuum After Sampling (in Hg)	Canister ID	Flow Cont. ID	Analysis Requested
<u>South Subsurface</u>	<u>2-21-19</u>	<u>AS</u>	<u>30</u>	<u>5</u>	<u>24117</u>	<u>Y-3</u>	<u>TO-15 + Helium</u>
<u>South Crawlspace</u>	<u>2-21-19</u>	<u>AI</u>	<u>30</u>	<u>9</u>	<u>28850</u>	<u>7422</u>	<u>TO-15</u>
<u>North Subsurface</u>	<u>2-21-19</u>	<u>AS</u>	<u>29</u>	<u>5</u>	<u>17348</u>	<u>7085</u>	<u>TO-15 + Helium</u>
<u>North Crawlspace</u>	<u>2-21-19</u>	<u>AI</u>	<u>28</u>	<u>4</u>	<u>18300</u>	<u>7091</u>	<u>TO-15</u>
<u>Admin Wing Basement</u>	<u>2-21-19</u>	<u>AI</u>	<u>29</u>	<u>3</u>	<u>15522</u>	<u>5610</u>	<u>TO-15</u>
<u>South 1st Floor "A"</u>	<u>2-21-19</u>	<u>AI</u>	<u>28</u>	<u>3</u>	<u>16953</u>	<u>7089</u>	<u>TO-15</u>
<u>Ambient</u>	<u>2-21-19</u>	<u>AO</u>	<u>28</u>	<u>4</u>	<u>24110</u>	<u>6869</u>	<u>TO-15</u>
Comments:		Detection Limits Required					Sampling Media
		$\leq 1 \text{ ug/m}^3$ <u> </u> NYSDEC V1 Limits <input checked="" type="checkbox"/> Routine Survey <u> </u> Other <u> </u>					6 Liter Canister <input checked="" type="checkbox"/> Tedlar Bag <u> </u>
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time		
<u>Settling Nasser</u>	<u>2-21-19</u>	<u>K. B. York</u>	<u>2/22/19</u> <u>11:50 AM</u>	<u>K. B. York</u>	<u>2/22/19</u> <u>11 AM</u>		
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time		
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time		
				<u>Settling Nasser</u>	<u>2/23/19</u> <u>1 pm</u>		