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 #: 12-23706
JULY 2012

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

> 1775 Expressway Drive North – Suite 1 Hauppauge, New York 11788 631-584-5492 Fax: 631-584-3395



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Section No. 1.0: Introduction

J.C. Broderick and Associates (JCB) was retained by the Bethpage Union Free School District (Bethpage) to perform Volatile Vapor Intrusion (VVI) sampling due to information gathered from the "Proposed Remedial Action Plan" with regards to the "Northrop Grumman-Bethpage Facility Site Number 13003A, May 2012" prepared by Division of Environmental Remediation, New York State Department of Environmental Conservation (NYSDEC-DER). 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, 1979* 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) 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 mobilization, 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.
 - A product inventory survey was completed, documenting possible sources of volatile chemicals present in the building during the indoor air sampling which could potentially influence the sample results. This inventory was completed utilizing the NYSDOH product inventory sheet provided in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", Final Version, October 2006. Please refer to Appendix D Indoor Air Quality Questionnaire and Building Survey for additional details.
 - 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 Teflonlined, 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 Phoenix Environmental Laboratories, Inc. (Phoenix) 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.
- 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 Phoenix Environmental Laboratories, Inc. (Phoenix)

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.

- 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 south west cafeteria.
 - ➤ 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.

- 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 Phoenix Environmental Laboratories, Inc. (Phoenix) 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.

- 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.

Phoenix Environmental Laboratories, Inc. (Phoenix) provided laboratory analytical services. Copies of Phoenix'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.

The laboratory analysis results for the air samples collected were reviewed and compared to the 90th percentile as listed in Table C1 NYSDOH 2003 Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes of the NYSDOH's "Final NYSDOH CEH BEEI Soil Vapor Intrusion Guidance" dated October 2006.

The following table summarizes the Air Sample Analytical Results of Detected Compounds:

\$7.1.4	ilo Vonce Interna	ion Analytical	Table No. 1		la vio EDA M-4	had TO 15		
Client Sample ID	tile Vapor Intrusion Analytical Results of Detected Compounds via EPA Method TO-15 Background North North South South South Subsurface Cafeteria Basement							
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)	3.1	ND	ND	ND	ND	ND	3.0	ND
1,2,4-Trichlorobenzene	3.4	658	1.23	717	1.72	1.42	1.13	ND
4-Ethyltoluene	NA	152	ND	184	ND	ND	ND	ND
4-Isopropyltoluene	NA	15.2	ND	16.3	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	NA	9.21	ND	8.76	ND	ND	ND	ND
Acetone	110	444	10.1	536	15.3	10.6	52.7	13.0
Benzene	15	237	ND	213	ND	ND	ND	ND
Carbon Tetrachloride	0.8	0.503	0.440	0.503	0.440	0.440	0.503	0.566
Chloroform	1.4	ND	ND	1.66	ND	ND	ND	ND
Chloromethane	3.3	ND	1.24	ND	1.01	1.24	1.86	1.34
Cyclohexane	8.1	44.4	ND	40.6	ND	ND	ND	ND
Dichlorodifluoromethane (Freon 12)	15	2.92	1.63	2.87	2.32	2.62	3.06	2.67
Ethanol	1,400	612	15.3	540	13.4	17.7	136	11.2
Ethyl Acetate	NA	12.3	ND	8.46	ND	ND	2.88	ND
Ethylbenzene	7.3	755	ND	824	ND	ND	1.04	ND
Heptane	19	205	ND	149	ND	ND	4.63	ND
Hexane	18	164	2.18	139	1.97	2.46	16.8	1.62
Isopropyl Alcohol	NA	8.62	3.56	10.4	4.05	5.23	18.6	8.97
Isopropylbenzene	0.9	37.9	ND	45.6	ND	ND	2.31	ND
m&p-Xylenes	12	2,690	2.04	3,000	2.56	1.39	3.56	ND
Methyl Ethyl Ketone	16	155	1.47	113	1.47	1.44	4.30	1.27
Methylene Chloride	22	3.12	ND	2.71	1.28	1.98	4.69	ND
n-Butylbenzene	1.2	56.5	ND	55.4	ND	ND	ND	ND
o-Xylene	7.6	772	ND	890	1.26	ND	2.26	ND

Table No. 1: Volatile Vapor Intrusion Analytical Results of Detected Compounds via EPA Method TO-15											
Client Sample ID	Background Values	North Subsurface ¹	North Crawlspace	South South South Crawlspace Cafeteria Basement Ambient				Ambient			
TO-15 List	μg/m ³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m ³	μg/m ³	μg/m ³			
Styrene	1.3	27.5	ND	31.4	ND	ND	1.66	ND			
Tetrachloroethene (PCE)	2.9	8.81	ND	2.91	ND	0.542	0.339	0.339			
Tetrahydrofuran	3.3	64.8	ND	60.1	ND	ND	ND	ND			
Toluene	58	5,120	2.67	5,350	2.82	2.26	8.81	1.62			
Trichloroethene (TCE)	0.5	ND	ND	0.322	ND	ND	ND	ND			
Trichlorofluoromethane (Freon 11)	17	13.2	1.85	11.6	1.85	1.91	3.20	2.47			

Notes: μg/m³ = parts per billion NA = Background Value Not Established ND=Not Detected above the laboratory minimum detection limit Background Values = NYSDOH 2003 Study of Volatile Organic Compounds in Air or Fuel Oil Heated Homes 90th Percentile

Section No. 5.0: Decision Matrices

Decision matrices are risk management tools developed by the NYSDOH to provide guidance on a casesby-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 two (2) 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	Result							
1,1,1-Trichloroethane (TCA)	Matrix 2	Take Reasonable Action						
Carbon Tetrachloride	Matrix 1	Take Reasonable Action						
Tetrachloroethene (PCE)	Matrix 2	No Further Action						
Trichloroethene (TCE) Matrix 1 No Further Action								
Notes: Only four (4) chemicals have been assigned to decision matrices by the NYSDOH to date.								

The results of the matrices indicate that "No Further Action" is required for Tetrachloroethene and Trichloroethene. However, the results of the matrices also recommend to "Take reasonable and practical actions to identify sources and reduce exposures" for 1,1,1-Trichlorethane and Carbon Tetrachloride.

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 sample.

¹ The State of New York does not have any standards, criteria, or guidance values for concentrations of volatile chemicals in subsurface vapors BOLD Indicates Result Above Background Value

Compounds in Gray are used in Decision Matrices 1 & 2. - See Table No. 2 for additional information.

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, with the exception of a single parameter (styrene), all detectable concentrations observed in the occupied spaces of the school building were below their background values as reported in the NYSDOH 2003 Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes 90th Percentile. An investigation revealed that the presence of styrene at its reported concentration is most likely associated with the building's operation and not attributable to VVI.

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

Section No. 8.0: Conclusions

A careful evaluation of the indoor air sampling results compared to the ambient (outdoor) results did reveal the presence of a discernible pattern suggesting that the building is being impacted with VVI. Coincidently, it appears that the plastic barrier installed in the crawlspace of the building, although not its intended purpose, has been relatively effectively 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.

It is also recommended that an investigation be performed to identify any possible sources of styrene, 1,1,1-Trichlorethane, and Carbon Tetrachloride associated with building operations. Steps should taken to reduce the presence of these parameters such as, keeping containers tightly capped or storing VOC containing products in ventilated areas.

Section No. 10.0: Certification

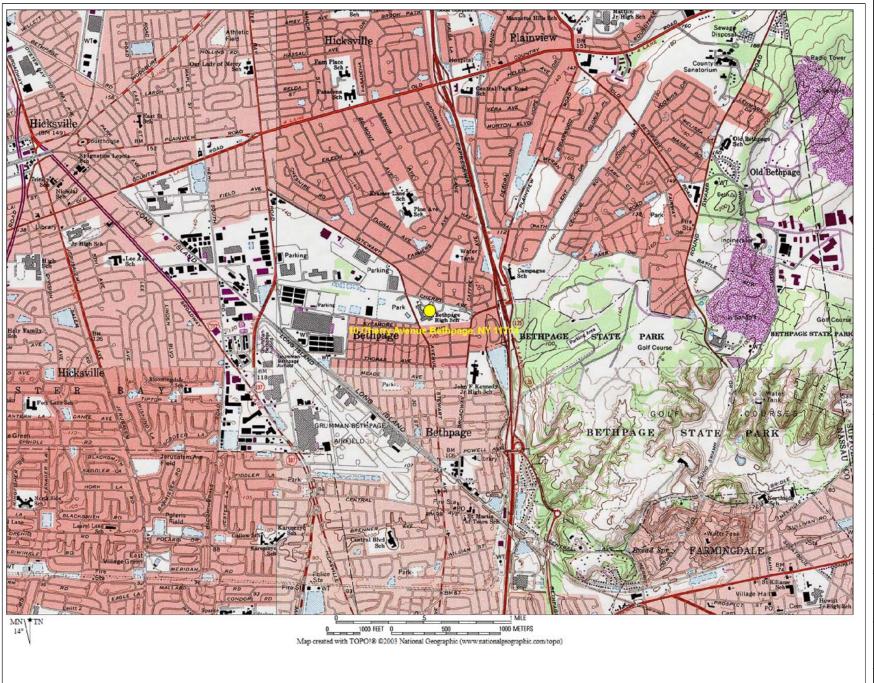
I certify that this Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", Final Version, October 2006 and that all activities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

Sincerely, J.C. Broderick & Associates, Inc.

Jeffrey V. Nannini Environmental Scientist

Steven Muller, CEC Project Manager

Attachment #1 Field Drawing



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

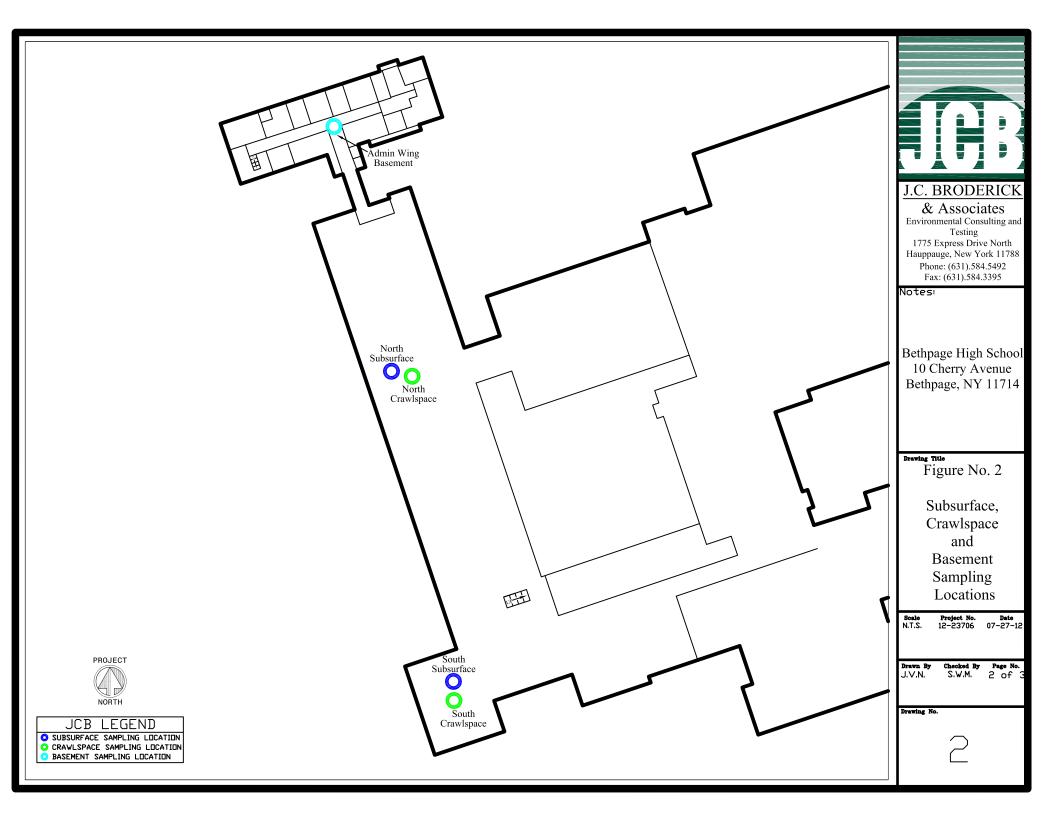
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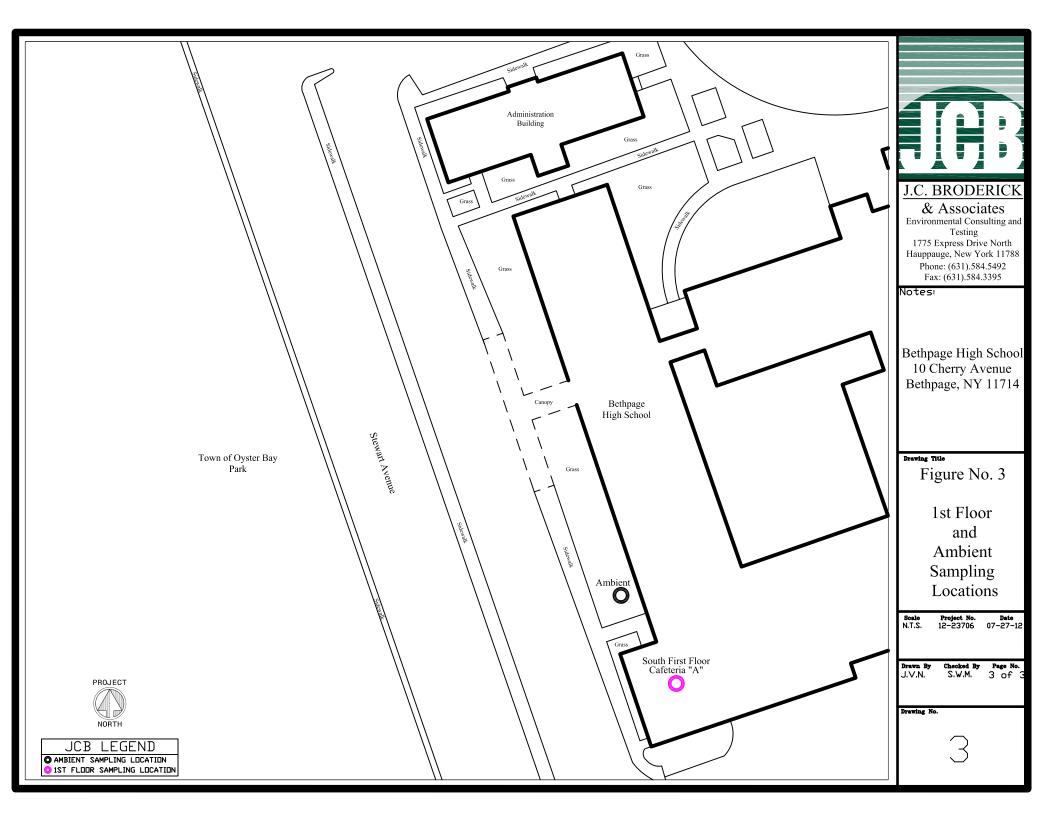
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Checked By Page No. S.W.M. 1 of 3

Drawing No.

1





Attachment #2 Field Photograph Logs

North Subsurface Sampling Location





Field Photograph Log

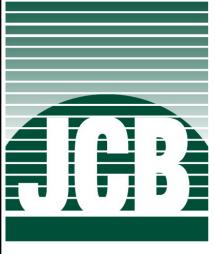
Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 01

North Crawlspace Sampling Location





Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 02

South Subsurface Sampling Location





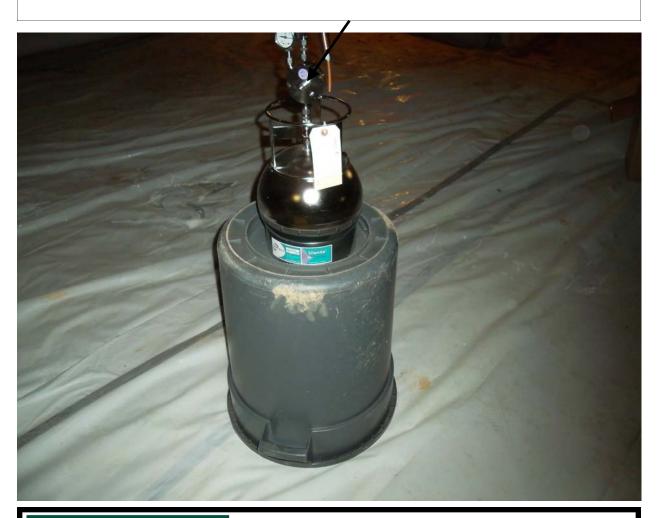
Field Photograph Log

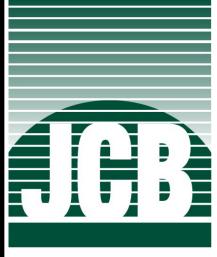
Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 03

South Crawlspace Sampling Location





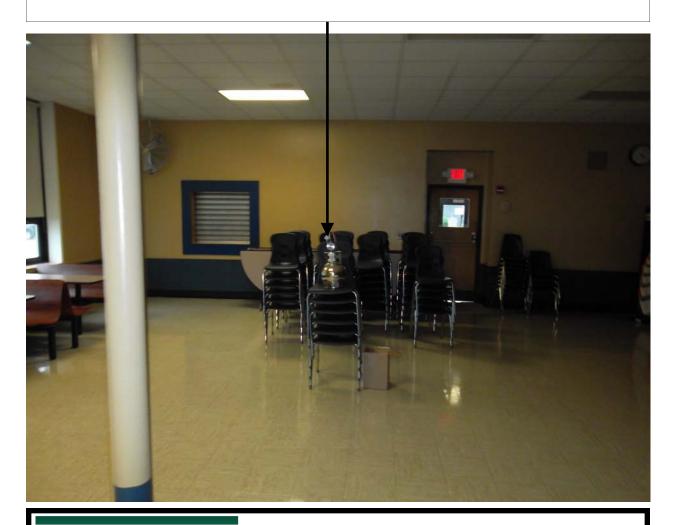
Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 04

South First Floor Cafeteria "A" Sampling Location





Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 05

Administration Wing Basement Sampling Location





Field Photograph Log

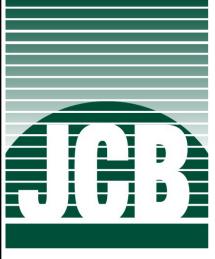
Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 06

Ambient Sampling Location





Field Photograph Log

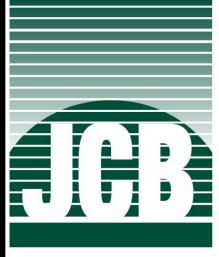
Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 07

Typical Subsurface Sampling Equipment and Setup





Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 08

Typical Summa® Canister Starting Pressure





Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 09

Typical Summa® Canister Ending Pressure





Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 10

Typical Subsurface Sampling Location Subsequent to Repair





Field Photograph Log

Volatile Vapor Intrusion Report

Bethpage High School 10 Cherry Avenue Bethpage, New York 11714

Photo No. 11

Attachment #3 Laboratory Analysis Report



Tuesday, July 31, 2012

Attn: Mr Steve Muller J C Broderick & Associates, Inc. 1775 Express Dr N Hauppauge, NY 11788

Project ID: **BETHPAGE HS** Sample ID#s: BC15776 - BC15782

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. All soils and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Laboratory Director

NELAC - #NY11301 CT Lab Registration #PH-0618 MA Lab Registration #MA-CT-007 ME Lab Registration #CT-007 NH Lab Registration #213693-A,B

RI Lab Registration #63 VT Lab Registration #VT11301

PA Lab Registration #68-03530

NJ Lab Registration #CT-003

NY Lab Registration #11301



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample InformationCustody InformationDateTimeMatrix:AIRCollected by:07/23/1217:00Location Code:JC-BRODReceived by:SW07/25/1216:15

Rush Request: 24 Hour Analyzed by: see "By" below

Laboratory Data

SDG ID: GBC15776

Phoenix ID: BC15776

Project ID: BETHPAGE HS

Client ID: NORTH SUB SURFACE

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Helium	< 5	5			07/27/12	KCA		•
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15 1	
1,1,1-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15	
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trimethylbenzene	134	0.204	658	1.00	07/26/12	KCA	TO15	
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15	
1,3,5-Trimethylbenzene	31.6	0.204	155	1.00	07/26/12	KCA	TO15	
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15	
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15 1	
4-Ethyltoluene	30.9	0.204	152	1.00	07/26/12	KCA	TO15 1	
4-Isopropyltoluene	2.77	0.182	15.2	1.00	07/26/12	KCA	TO15 1	
4-Methyl-2-pentanone(MIBK)	2.25	0.244	9.21	1.00	07/26/12	KCA	TO15	
Acetone	187	0.421	444	1.00	07/26/12	KCA	TO15	
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15	
Benzene	74.2	0.313	237	1.00	07/26/12	KCA	TO15	
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15 1	

Page 1 of 21 Ver 1

Client ID: NORTH SUB SURFACE

Client ID: NORTH SUB	ppbv	ppbv	ug/m3	ug/m3				
Parameter	Result	RL	Result	RL	Date/Time	Ву	Reference	
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA	TO15	
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15	
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA	TO15	
Carbon Disulfide	0.65	0.321	2.02	1.00	07/26/12	KCA	TO15	
Carbon Tetrachloride	0.08	0.040	0.503	0.25	07/26/12	KCA	TO15	
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15	
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15	
Chloroform	ND	0.205	ND	1.00	07/26/12	KCA	TO15	
Chloromethane	ND	0.484	ND	1.00	07/26/12	KCA	TO15	
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	I
Cyclohexane	12.9	0.291	44.4	1.00	07/26/12	KCA	TO15	
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15	
Dichlorodifluoromethane	0.59	0.202	2.92	1.00	07/26/12	KCA	TO15	
Ethanol	325	0.531	612	1.00	07/26/12	KCA	TO15	I
Ethyl acetate	3.42	0.278	12.3	1.00	07/26/12	KCA	TO15	I
Ethylbenzene	174	0.230	755	1.00	07/26/12	KCA	TO15	
Heptane	50.1	0.244	205	1.00	07/26/12	KCA	TO15	
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15	
Hexane	46.6	0.284	164	1.00	07/26/12	KCA	TO15	
Isopropylalcohol	3.51	0.407	8.62	1.00	07/26/12	KCA	TO15	
Isopropylbenzene	7.72	0.204	37.9	1.00	07/26/12	KCA	TO15	
m,p-Xylene	621	0.230	2690	1.00	07/26/12	KCA	TO15	
Methyl Ethyl Ketone	52.6	0.339	155	1.00	07/26/12	KCA	TO15	
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
Methylene Chloride	0.9	0.288	3.12	1.00	07/26/12	KCA	TO15	
n-Butylbenzene	10.3	0.182	56.5	1.00	07/26/12	KCA	TO15	I
o-Xylene	178	0.230	772	1.00	07/26/12	KCA	TO15	
Propylene	ND	0.581	ND	1.00	07/26/12	KCA	TO15	I
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	I
Styrene	6.47	0.235	27.5	1.00	07/26/12	KCA	TO15	
Tetrachloroethene	1.3	0.037	8.81	0.25	07/26/12	KCA	TO15	
Tetrahydrofuran	22	0.339	64.8	1.00	07/26/12	KCA	TO15	1
Toluene	1360	0.266	5120	1.00	07/26/12	KCA	TO15	
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	
Trichloroethene	ND	0.047	ND	0.25	07/26/12	KCA	TO15	
Trichlorofluoromethane	2.36	0.178	13.2	1.00	07/26/12	KCA	TO15	
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12	KCA	TO15	
QA/QC Surrogates								
% Bromofluorobenzene	114	%	114	%	07/26/12	KCA	TO15	

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Phoenix I.D.: BC15776

Project ID: BETHPAGE HS Phoenix I.D.: BC15776

Client ID: NORTH SUB SURFACE

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quanitation) ND=Not Detected BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample InformationCustody InformationDateTimeMatrix:AIRCollected by:07/23/1216:59Location Code:JC-BRODReceived by:SW07/25/1216:15

Rush Request: 24 Hour Analyzed by: see "By" below

<u>Lä</u>

_aboratory Data SDG ID: GBC15776

Phoenix ID: BC15777

Project ID: BETHPAGE HS

P.O.#:

Client ID: NORTH CRAWL SPACE

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15	1
1,1,1-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15	
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trimethylbenzene	0.25	0.204	1.23	1.00	07/26/12	KCA	TO15	
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15	
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15	
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15	1
4-Ethyltoluene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	1
4-Isopropyltoluene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15	
Acetone	4.24	0.421	10.1	1.00	07/26/12	KCA	TO15	
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15	
Benzene	ND	0.313	ND	1.00	07/26/12	KCA	TO15	
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15	1
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA	TO15	

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	ppbv	ppbv	ug/m3	ug/m3				
Parameter	Result	RL	Result	RL	Date/Time	Ву	Reference	
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15	
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA	TO15	
Carbon Disulfide	ND	0.321	ND	1.00	07/26/12	KCA	TO15	
Carbon Tetrachloride	0.07	0.040	0.440	0.25	07/26/12	KCA	TO15	
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15	
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15	
Chloroform	ND	0.205	ND	1.00	07/26/12	KCA	TO15	
Chloromethane	0.6	0.484	1.24	1.00	07/26/12	KCA	TO15	
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	1
Cyclohexane	ND	0.291	ND	1.00	07/26/12	KCA	TO15	
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15	
Dichlorodifluoromethane	0.33	0.202	1.63	1.00	07/26/12	KCA	TO15	
Ethanol	8.14	0.531	15.3	1.00	07/26/12	KCA	TO15	1
Ethyl acetate	ND	0.278	ND	1.00	07/26/12	KCA	TO15	1
Ethylbenzene	ND	0.230	ND	1.00	07/26/12	KCA	TO15	
Heptane	ND	0.244	ND	1.00	07/26/12	KCA	TO15	
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15	
Hexane	0.62	0.284	2.18	1.00	07/26/12	KCA	TO15	
Isopropylalcohol	1.45	0.407	3.56	1.00	07/26/12	KCA	TO15	
Isopropylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
m,p-Xylene	0.47	0.230	2.04	1.00	07/26/12	KCA	TO15	
Methyl Ethyl Ketone	0.5	0.339	1.47	1.00	07/26/12	KCA	TO15	
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
Methylene Chloride	ND	0.288	ND	1.00	07/26/12	KCA	TO15	
n-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
o-Xylene	ND	0.230	ND	1.00	07/26/12	KCA	TO15	
Propylene	ND	0.581	ND	1.00	07/26/12	KCA	TO15	1
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
Styrene	ND	0.235	ND	1.00	07/26/12	KCA	TO15	
Tetrachloroethene	ND	0.037	ND	0.25	07/26/12	KCA	TO15	
Tetrahydrofuran	ND	0.339	ND	1.00	07/26/12	KCA	TO15	1
Toluene	0.71	0.266	2.67	1.00	07/26/12	KCA	TO15	
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	
Trichloroethene	ND	0.047	ND	0.25	07/26/12	KCA	TO15	
Trichlorofluoromethane	0.33	0.178	1.85	1.00	07/26/12	KCA	TO15	
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12	KCA	TO15	
QA/QC Surrogates								
% Bromofluorobenzene	97	%	97	%	07/26/12	KCA	TO15	

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Phoenix I.D.: BC15777

Project ID: BETHPAGE HS Phoenix I.D.: BC15777

Client ID: NORTH CRAWL SPACE

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quanitation) ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample InformationCustody InformationDateTimeMatrix:AIRCollected by:07/23/1216:16Location Code:JC-BRODReceived by:SW07/25/1216:15

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#: Laboratory Data

SDG ID: GBC15776

Phoenix ID: BC15778

Project ID: BETHPAGE HS

Client ID: SOUTH SUB SURFACE

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
	< 5	5	resuit	114	07/27/12		PEL 1	-
Helium	< 5	5			07/27/12	KCA	PEL '	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15 1	
1,1,1-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15	
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trimethylbenzene	146	0.204	717	1.00	07/26/12	KCA	TO15	
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15	
1,3,5-Trimethylbenzene	34.5	0.204	170	1.00	07/26/12	KCA	TO15	
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15	
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15 1	
4-Ethyltoluene	37.5	0.204	184	1.00	07/26/12	KCA	TO15 1	
4-Isopropyltoluene	2.97	0.182	16.3	1.00	07/26/12	KCA	TO15 1	
4-Methyl-2-pentanone(MIBK)	2.14	0.244	8.76	1.00	07/26/12	KCA	TO15	
Acetone	226	0.421	536	1.00	07/26/12	KCA	TO15	
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15	
Benzene	66.6	0.313	213	1.00	07/26/12	KCA	TO15	
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15 1	

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Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA		-
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15	
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA		
Carbon Disulfide	0.83	0.321	2.58	1.00	07/26/12		TO15	
Carbon Tetrachloride	0.08	0.040	0.503	0.25	07/26/12	KCA	TO15	
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15	
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15	
Chloroform	0.34	0.205	1.66	1.00	07/26/12	KCA	TO15	
Chloromethane	ND	0.484	ND	1.00	07/26/12	KCA		
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA		
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA		l
Cyclohexane	11.8	0.291	40.6	1.00	07/26/12	KCA		
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15	
Dichlorodifluoromethane	0.58	0.202	2.87	1.00	07/26/12	KCA	TO15	
Ethanol	287	0.531	540	1.00	07/26/12	KCA	TO15 1	J
Ethyl acetate	2.35	0.278	8.46	1.00	07/26/12	KCA	TO15 1	J
Ethylbenzene	190	0.230	824	1.00	07/26/12	KCA	TO15	
Heptane	36.5	0.244	149	1.00	07/26/12	KCA	TO15	
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15	
Hexane	39.6	0.284	139	1.00	07/26/12	KCA	TO15	
Isopropylalcohol	4.22	0.407	10.4	1.00	07/26/12	KCA	TO15	
Isopropylbenzene	9.29	0.204	45.6	1.00	07/26/12	KCA	TO15	
m,p-Xylene	692	0.230	3000	1.00	07/26/12	KCA	TO15	
Methyl Ethyl Ketone	38.5	0.339	113	1.00	07/26/12	KCA	TO15	
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
Methylene Chloride	0.78	0.288	2.71	1.00	07/26/12	KCA	TO15	
n-Butylbenzene	10.1	0.182	55.4	1.00	07/26/12	KCA	TO15 1	ı
o-Xylene	205	0.230	890	1.00	07/26/12	KCA	TO15	
Propylene	ND	0.581	ND	1.00	07/26/12	KCA	TO15 1	ı
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15 1	ı
Styrene	7.37	0.235	31.4	1.00	07/26/12	KCA	TO15	
Tetrachloroethene	0.43	0.037	2.91	0.25	07/26/12	KCA	TO15	
Tetrahydrofuran	20.4	0.339	60.1	1.00	07/26/12	KCA	TO15 1	ı
Toluene	1420	0.266	5350	1.00	07/26/12		TO15	
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12		TO15	
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	
Trichloroethene	0.06	0.047	0.322	0.25	07/26/12	KCA	TO15	
Trichlorofluoromethane	2.07	0.178	11.6	1.00	07/26/12	KCA	TO15	
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12		TO15	
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12		TO15	
QA/QC Surrogates								
% Bromofluorobenzene	114	%	114	%	07/26/12	KCA	TO15	

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Phoenix I.D.: BC15778

Project ID: BETHPAGE HS Phoenix I.D.: BC15778

Client ID: SOUTH SUB SURFACE

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quanitation) ND=Not Detected BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



SDG ID: GBC15776

Phoenix ID: BC15779

Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample InformationCustody InformationDateTimeMatrix:AIRCollected by:07/23/1216:17Location Code:JC-BRODReceived by:SW07/25/1216:15

<u>aboratory</u> Data

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#:

Project ID: BETHPAGE HS

Client ID: SOUTH CRAWL SPACE

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference
Volatiles (TO15)							
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15 1
1,1,1-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15
1,2,4-Trimethylbenzene	0.35	0.204	1.72	1.00	07/26/12	KCA	TO15
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15 1
4-Ethyltoluene	ND	0.204	ND	1.00	07/26/12	KCA	TO15 1
4-Isopropyltoluene	ND	0.182	ND	1.00	07/26/12	KCA	TO15 1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15
Acetone	6.44	0.421	15.3	1.00	07/26/12	KCA	TO15
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15
Benzene	ND	0.313	ND	1.00	07/26/12	KCA	TO15
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15 1
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA	TO15

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Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15	
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA	TO15	
Carbon Disulfide	ND	0.321	ND	1.00	07/26/12	KCA	TO15	
Carbon Tetrachloride	0.07	0.040	0.440	0.25	07/26/12	KCA	TO15	
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15	
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15	
Chloroform	ND	0.205	ND	1.00	07/26/12	KCA	TO15	
Chloromethane	0.49	0.484	1.01	1.00	07/26/12	KCA	TO15	
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	1
Cyclohexane	ND	0.291	ND	1.00	07/26/12	KCA	TO15	
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15	
Dichlorodifluoromethane	0.47	0.202	2.32	1.00	07/26/12	KCA	TO15	
Ethanol	7.14	0.531	13.4	1.00	07/26/12	KCA	TO15	1
Ethyl acetate	ND	0.278	ND	1.00	07/26/12	KCA	TO15	1
Ethylbenzene	ND	0.230	ND	1.00	07/26/12	KCA	TO15	
Heptane	ND	0.244	ND	1.00	07/26/12	KCA	TO15	
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15	
Hexane	0.56	0.284	1.97	1.00	07/26/12	KCA	TO15	
Isopropylalcohol	1.65	0.407	4.05	1.00	07/26/12	KCA	TO15	
Isopropylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
m,p-Xylene	0.59	0.230	2.56	1.00	07/26/12	KCA	TO15	
Methyl Ethyl Ketone	0.5	0.339	1.47	1.00	07/26/12	KCA	TO15	
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
Methylene Chloride	0.37	0.288	1.28	1.00	07/26/12	KCA	TO15	
n-Butylbenzene	ND	0.182	ND	1.00	07/26/12		TO15	1
o-Xylene	0.29	0.230	1.26	1.00	07/26/12		TO15	
Propylene	ND	0.581	ND	1.00	07/26/12		TO15	1
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	_	TO15	1
Styrene	ND	0.235	ND	1.00	07/26/12		TO15	
Tetrachloroethene	ND	0.037	ND	0.25	07/26/12	KCA	TO15	
Tetrahydrofuran	ND	0.339	ND	1.00	07/26/12		TO15	1
Toluene	0.75	0.266	2.82	1.00	07/26/12		TO15	
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12		TO15	
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12		TO15	
Trichloroethene	ND	0.047	ND	0.25	07/26/12		TO15	
Trichlorofluoromethane	0.33	0.178	1.85	1.00	07/26/12		TO15	
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12		TO15	
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12	KCA	TO15	
QA/QC Surrogates								
% Bromofluorobenzene	99	%	99	%	07/26/12	KCA	TO15	

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Phoenix I.D.: BC15779

Project ID: BETHPAGE HS Phoenix I.D.: BC15779

Client ID: SOUTH CRAWL SPACE

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample InformationCustody InformationDateTimeMatrix:AIRCollected by:07/23/1216:33Location Code:JC-BRODReceived by:SW07/25/1216:15

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#:

Laboratory Data

SDG ID: GBC15776

Phoenix ID: BC15780

Project ID: BETHPAGE HS

Client ID: SOUTH FIRST FLOOR CAFETERIA A

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Volatiles (TO15)						-		_
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15	1
1,1,1-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12		TO15	
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA		
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trimethylbenzene	0.29	0.204	1.42	1.00	07/26/12	KCA	TO15	
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15	
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15	
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15	1
4-Ethyltoluene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	1
4-Isopropyltoluene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15	
Acetone	4.47	0.421	10.6	1.00	07/26/12	KCA	TO15	
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15	
Benzene	ND	0.313	ND	1.00	07/26/12	KCA	TO15	
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15	1
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA	TO15	

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Client ID: SOUTH FIRST FLOOR CAFETERIA A									
Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference		
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15		
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA	TO15		
Carbon Disulfide	ND	0.321	ND	1.00	07/26/12	KCA	TO15		
Carbon Tetrachloride	0.07	0.040	0.440	0.25	07/26/12	KCA	TO15		
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15		
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15		
Chloroform	ND	0.205	ND	1.00	07/26/12	KCA	TO15		
Chloromethane	0.6	0.484	1.24	1.00	07/26/12	KCA	TO15		
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15		
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	1	
Cyclohexane	ND	0.291	ND	1.00	07/26/12	KCA	TO15		
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15		
Dichlorodifluoromethane	0.53	0.202	2.62	1.00	07/26/12	KCA	TO15		
Ethanol	9.38	0.531	17.7	1.00	07/26/12	KCA	TO15	1	
Ethyl acetate	ND	0.278	ND	1.00	07/26/12	KCA	TO15	1	
Ethylbenzene	ND	0.230	ND	1.00	07/26/12	KCA	TO15		
Heptane	ND	0.244	ND	1.00	07/26/12	KCA	TO15		
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15		
Hexane	0.7	0.284	2.46	1.00	07/26/12	KCA	TO15		
Isopropylalcohol	2.13	0.407	5.23	1.00	07/26/12	KCA	TO15		
Isopropylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15		
m,p-Xylene	0.32	0.230	1.39	1.00	07/26/12	KCA	TO15		
Methyl Ethyl Ketone	0.49	0.339	1.44	1.00	07/26/12	KCA	TO15		
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15		
Methylene Chloride	0.57	0.288	1.98	1.00	07/26/12	KCA	TO15		
n-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1	
o-Xylene	ND	0.230	ND	1.00	07/26/12	KCA	TO15		
Propylene	ND	0.581	ND	1.00	07/26/12	KCA	TO15	1	
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1	
Styrene	ND	0.235	ND	1.00	07/26/12	KCA	TO15		
Tetrachloroethene	0.08	0.037	0.542	0.25	07/26/12	KCA	TO15		
Tetrahydrofuran	ND	0.339	ND	1.00	07/26/12	KCA	TO15	1	
Toluene	0.6	0.266	2.26	1.00	07/26/12	KCA	TO15		
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15		
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15		
Trichloroethene	ND	0.047	ND	0.25	07/26/12	KCA	TO15		
Trichlorofluoromethane	0.34	0.178	1.91	1.00	07/26/12	KCA	TO15		
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12	KCA	TO15		
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12	KCA	TO15		
QA/QC Surrogates									
% Bromofluorobenzene	101	%	101	%	07/26/12	KCA	TO15		

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Phoenix I.D.: BC15780

Project ID: BETHPAGE HS Phoenix I.D.: BC15780

Client ID: SOUTH FIRST FLOOR CAFETERIA A

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time. RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quanitation) ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample Information **Custody Information** Date Time Matrix: **AIR** Collected by: 07/23/12 16:29 Location Code: JC-BROD Received by: SW 07/25/12 16:15

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#:

Project ID: **BETHPAGE HS** Client ID: ADMIN WING BASEMENT

_aboratory Data

SDG ID: GBC15776 Phoenix ID: BC15781

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference
Volatiles (TO15)							
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15 1
1,1,1-Trichloroethane	0.55	0.183	3.00	1.00	07/26/12	KCA	TO15
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15
1,2,4-Trimethylbenzene	0.23	0.204	1.13	1.00	07/26/12	KCA	TO15
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15 1
4-Ethyltoluene	ND	0.204	ND	1.00	07/26/12	KCA	TO15 1
4-Isopropyltoluene	ND	0.182	ND	1.00	07/26/12	KCA	TO15 1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15
Acetone	22.2	0.421	52.7	1.00	07/26/12	KCA	TO15
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15
Benzene	ND	0.313	ND	1.00	07/26/12	KCA	TO15
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15 1
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA	TO15

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Client ID: ADMIN WING B	ppbv	ppbv	ug/m3	ug/m3			
Parameter	Result	RL	Result	RL	Date/Time	Ву	Reference
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA	TO15
Carbon Disulfide	ND	0.321	ND	1.00	07/26/12	KCA	TO15
Carbon Tetrachloride	0.08	0.040	0.503	0.25	07/26/12	KCA	TO15
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15
Chloroform	ND	0.205	ND	1.00	07/26/12	KCA	TO15
Chloromethane	0.9	0.484	1.86	1.00	07/26/12	KCA	TO15
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15 1
Cyclohexane	ND	0.291	ND	1.00	07/26/12	KCA	TO15
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15
Dichlorodifluoromethane	0.62	0.202	3.06	1.00	07/26/12	KCA	TO15
Ethanol	72.2	0.531	136	1.00	07/26/12	KCA	TO15 1
Ethyl acetate	0.8	0.278	2.88	1.00	07/26/12	KCA	TO15 1
Ethylbenzene	0.24	0.230	1.04	1.00	07/26/12	KCA	TO15
Heptane	1.13	0.244	4.63	1.00	07/26/12	KCA	TO15
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15
Hexane	4.76	0.284	16.8	1.00	07/26/12	KCA	TO15
Isopropylalcohol	7.58	0.407	18.6	1.00	07/26/12	KCA	TO15
Isopropylbenzene	0.47	0.204	2.31	1.00	07/26/12	KCA	TO15
m,p-Xylene	0.82	0.230	3.56	1.00	07/26/12	KCA	TO15
Methyl Ethyl Ketone	1.46	0.339	4.30	1.00	07/26/12	KCA	TO15
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15
Methylene Chloride	1.35	0.288	4.69	1.00	07/26/12	KCA	TO15
n-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15 1
o-Xylene	0.52	0.230	2.26	1.00	07/26/12	KCA	TO15
Propylene	ND	0.581	ND	1.00	07/26/12	KCA	TO15 1
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15 1
Styrene	0.39	0.235	1.66	1.00	07/26/12	KCA	TO15
Tetrachloroethene	0.05	0.037	0.339	0.25	07/26/12	KCA	TO15
Tetrahydrofuran	ND	0.339	ND	1.00	07/26/12	KCA	TO15 1
Toluene	2.34	0.266	8.81	1.00	07/26/12	KCA	TO15
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15
Trichloroethene	ND	0.047	ND	0.25	07/26/12	KCA	TO15
Trichlorofluoromethane	0.57	0.178	3.20	1.00	07/26/12	KCA	TO15
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12	KCA	TO15
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12	KCA	TO15
QA/QC Surrogates							
% Bromofluorobenzene	99	%	99	%	07/26/12	KCA	TO15

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Phoenix I.D.: BC15781

Project ID: BETHPAGE HS Phoenix I.D.: BC15781

Client ID: ADMIN WING BASEMENT

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

July 31, 2012

FOR: Attn: Mr Steve Muller

J C Broderick & Associates, Inc.

1775 Express Dr N Hauppauge, NY 11788

Sample InformationCustody InformationDateTimeMatrix:AIRCollected by:07/23/1216:32Location Code:JC-BRODReceived by:SW07/25/1216:15

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#: Laboratory Data

SDG ID: GBC15776

Phoenix ID: BC15782

Project ID: BETHPAGE HS

Client ID: AMBIENT

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Volatiles (TO15)								_
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA	TO15	1
1,1,1-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA	TO15	
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	07/26/12	KCA		
1,1,2-Trichloroethane	ND	0.183	ND	1.00	07/26/12	KCA		
1,1-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,1-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	07/26/12	KCA	TO15	
1,2,4-Trimethylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichloroethane	ND	0.247	ND	1.00	07/26/12	KCA	TO15	
1,2-dichloropropane	ND	0.216	ND	1.00	07/26/12	KCA	TO15	
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	07/26/12	KCA	TO15	
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
1,3-Butadiene	ND	0.452	ND	1.00	07/26/12	KCA	TO15	
1,3-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dichlorobenzene	ND	0.166	ND	1.00	07/26/12	KCA	TO15	
1,4-Dioxane	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
2-Hexanone(MBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15	1
4-Ethyltoluene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	1
4-Isopropyltoluene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	07/26/12	KCA	TO15	
Acetone	5.47	0.421	13.0	1.00	07/26/12	KCA	TO15	
Acrylonitrile	ND	0.461	ND	1.00	07/26/12	KCA	TO15	
Benzene	ND	0.313	ND	1.00	07/26/12	KCA	TO15	
Benzyl chloride	ND	0.193	ND	1.00	07/26/12	KCA	TO15	1
Bromodichloromethane	ND	0.149	ND	1.00	07/26/12	KCA	TO15	

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Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	Ву	Reference	
Bromoform	ND	0.097	ND	1.00	07/26/12	KCA	TO15	
Bromomethane	ND	0.258	ND	1.00	07/26/12	KCA	TO15	
Carbon Disulfide	ND	0.321	ND	1.00	07/26/12	KCA	TO15	
Carbon Tetrachloride	0.09	0.040	0.566	0.25	07/26/12	KCA	TO15	
Chlorobenzene	ND	0.217	ND	1.00	07/26/12	KCA	TO15	
Chloroethane	ND	0.379	ND	1.00	07/26/12	KCA	TO15	
Chloroform	ND	0.205	ND	1.00	07/26/12	KCA	TO15	
Chloromethane	0.65	0.484	1.34	1.00	07/26/12	KCA	TO15	
Cis-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	1
Cyclohexane	ND	0.291	ND	1.00	07/26/12	KCA	TO15	
Dibromochloromethane	ND	0.117	ND	1.00	07/26/12	KCA	TO15	
Dichlorodifluoromethane	0.54	0.202	2.67	1.00	07/26/12	KCA	TO15	
Ethanol	5.97	0.531	11.2	1.00	07/26/12	KCA	TO15	1
Ethyl acetate	ND	0.278	ND	1.00	07/26/12	KCA	TO15	1
Ethylbenzene	ND	0.230	ND	1.00	07/26/12	KCA	TO15	
Heptane	ND	0.244	ND	1.00	07/26/12	KCA	TO15	
Hexachlorobutadiene	ND	0.094	ND	1.00	07/26/12	KCA	TO15	
Hexane	0.46	0.284	1.62	1.00	07/26/12	KCA	TO15	
Isopropylalcohol	3.65	0.407	8.97	1.00	07/26/12	KCA	TO15	
Isopropylbenzene	ND	0.204	ND	1.00	07/26/12	KCA	TO15	
m,p-Xylene	ND	0.230	ND	1.00	07/26/12	KCA	TO15	
Methyl Ethyl Ketone	0.43	0.339	1.27	1.00	07/26/12	KCA	TO15	
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	07/26/12	KCA	TO15	
Methylene Chloride	ND	0.288	ND	1.00	07/26/12	KCA	TO15	
n-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
o-Xylene	ND	0.230	ND	1.00	07/26/12	KCA	TO15	
Propylene	ND	0.581	ND	1.00	07/26/12	KCA	TO15	1
sec-Butylbenzene	ND	0.182	ND	1.00	07/26/12	KCA	TO15	1
Styrene	ND	0.235	ND	1.00	07/26/12	KCA	TO15	
Tetrachloroethene	0.05	0.037	0.339	0.25	07/26/12	KCA	TO15	
Tetrahydrofuran	ND	0.339	ND	1.00	07/26/12	KCA	TO15	1
Toluene	0.43	0.266	1.62	1.00	07/26/12	KCA	TO15	
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	07/26/12	KCA	TO15	
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	07/26/12	KCA	TO15	
Trichloroethene	ND	0.047	ND	0.25	07/26/12	KCA	TO15	
Trichlorofluoromethane	0.44	0.178	2.47	1.00	07/26/12	KCA	TO15	
Trichlorotrifluoroethane	ND	0.130	ND	1.00	07/26/12	KCA	TO15	
Vinyl Chloride	ND	0.098	ND	0.25	07/26/12	KCA	TO15	
QA/QC Surrogates								
% Bromofluorobenzene	98	%	98	%	07/26/12	KCA	TO15	

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Project ID: BETHPAGE HS Phoenix I.D.: BC15782

Client ID: AMBIENT

ppbv ppbv ug/m3 ug/m3
Parameter Result RL Result RL Date/Time By Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Pratical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected

BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

July 31, 2012

Reviewed and Released by: Bobbi Aloisa, Vice President

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Tuesday, July 31, 2012

Requested Criteria: None

Sample Criteria Exceedences Report GBC15776 - JC-BROD

State: NY

RL Analysis
SampNo Acode Phoenix Analyte Criteria Units
Result RL Criteria Units

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Page 1 of 1

^{***} No Data to Display ***

attest that all media released by Phoenix Environmental Laboratories, Inc. have been received in good working condition smuller@jcbroderick.com ANALYSES ᇹ Helium in Percent × GI-O × × × × × × × Other: Equis ₱1-O. Fax #: ______ Data Delivery: Grab (G) Composite (C) MATRIX ŋ Ø Ø ø g G Ø Data Format M and agree to the terms and conditions as listed on the back of this document: GISKey Soil Gas × Excel PDF Ambient/Indoor Air × × × × × 10 Cherry Ave., Bethpage, NY 11714 Canister Pressur at End ("Hg) Sampled by: Steven Muller Project Name: Bethpage HS Deliverable: CHAIN OF CUSTODY RECORD AIR ANALYSES 5.0 5.5 5.0 5.0 5.0 5.5 5.0 New York 587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040 MCP RCP 🗆 o@phoenixlabs.com Fax (860) 645-0823 Client Services (860) 645-1102 Pressure at Start (" Hg) Canister Location: 29.5 29.5 93 8 8 8 30 State where samples collected: State: Sample Start Date 7/23/12 7/23/12 7/23/12 7/23/12 7/23/12 7/23/12 7/23/12 Criteria Requested: Email: info@phoenixlabs.com Sampling End Time 17:00 16:59 16:16 16:17 16:33 16:29 16:32 Sampling Start Time 725hJ619 80.6 1/22/1 3 8:32 9:00 8:59 8:16 8:17 8:33 8:29 Time: per Gili Flow Controller Setting (mL/min) 7-25-12 Date: Ѕате Ϋ́ ž Flow Regulator 05035 04959 04978 05043 05030 04977 # **Q**I 05037 nvoice to: Address: Quote # P.O.# Pressure Pressure 4° wlc+IP Canister ("Hg) LAB USE ONLY \mathcal{O}_{J} ゴ 3 ゴ 6 ナー ゴ ţ SPECIAL INSTRUCTIONS, OC REQUIREMENTS, REGULATORY INFORMATION

34 HR RUSH Outgoing Canister (" Hg) 1775 Expressway Drive North, Hauppauge, NY 11788 30 30 8 ဗ္က 30 33 8 Accepted by: Canister Size (L) 6.0 6.0 6.0 6.0 6.0 6.0 6.0 Canister ID # J. C. Broderick & Associates, Inc. 11286 11288 0217 494 352 480 487 (631) 584-5492 x 337 North Sub-Surface North Crawl Space South Crawl Space South Sub-Surface South First Floor Cafeteria - A Admin Wing Basement Sample ID Steven Muller Client Ambient Relinquished by 98181 15783 15779 Phoenix ID # 1577C 15777 15778 18781 Project Mgr: Report to: Address: Phone #

Is Canister Returned Unused? Y/N

Attachment #4 Indoor Air Quality Questionnaire and Building Survey

NEW YORK STATE DEPARTMENT OF HEALTH INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name		Date/Time Prepared	
Preparer's Affiliation		Phone No	
Purpose of Investigation_			
1. OCCUPANT:			
Interviewed: Y/N			
Last Name:		First Name:	-
Address:			-
County:			
Home Phone:	Offic	ce Phone:	
Number of Occupants/pe	rsons at this locatio	n Age of Occupants	
2. OWNER OR LANDI	L ORD: (Check if s	ame as occupant)	
Interviewed: Y/N			
Last Name:	F	First Name:	_
Address:			-
County:			
Home Phone:	Offi	ice Phone:	
3. BUILDING CHARA	CTERISTICS		
Type of Building: (Circl	le appropriate respo	nse)	
Residential Industrial	School Church	Commercial/Multi-use Other:	

If the property is residential, type? (Circle appropriate response)

	Ranch2-Family3-FamilyRaised RanchSplit LevelColonialCape CodContemporaryMobile Home		l Home	
Duplex Modular	Apartment House Log Home	e Townho Other:_	ouses/Condos	
If multiple units, how	many?			
If the property is com	nercial, type?			
Business Type(s) _				
Does it include resi	dences (i.e., multi-use)?	Y / N	If yes, how many?	
Other characteristics:				
Number of floors	I	Building age		
Is the building insul	ated? Y / N	How air tight?	Tight / Average / Not Tigh	t
4. AIRFLOW				
Use air current tubes o	or tracer smoke to evalua	ate airflow pat	terns and qualitatively des	scribe:
Airflow between floors				
Airflow near source				
Outdoor air infiltration				
Infiltration into air ducts	S			

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construc	tion: wood	frame concre	te stone	brick
b. Basement type:	full	crawls	pace slab	other
c. Basement floor:	concr	ete dirt	stone	other
d. Basement floor:	uncov	vered covere	d covered w	vith
e. Concrete floor:	unsea	led sealed	sealed wit	th
f. Foundation walls:	poure	d block	stone	other
g. Foundation walls:	unsea	led sealed	sealed wit	th
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finish	ed unfinis	hed partially f	ïnished
j. Sump present?	Y / N			
k. Water in sump?	Y/N/not ap	plicable		
Basement/Lowest level dept	h below grade: _	(feet)		
6. HEATING, VENTINGCype of heating system(s) us				mary)
Hot air circulation	Heat j	oump	Hot water baseboa	
Space Heaters Electric baseboard		n radiation l stove	Radiant floor Outdoor wood box	iler Other
The primary type of fuel use	ed is:			
Natural Gas Electric Wood	Fuel (Propa Coal		Kerosene Solar	
Domestic hot water tank fue	eled by:			
Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other

Are there air distribution ducts present?	Y / N
---	-------

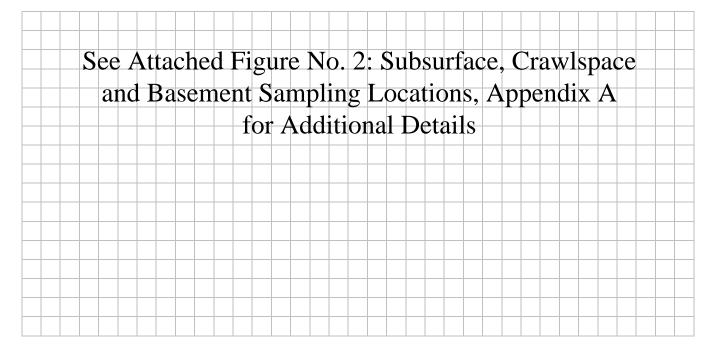
	e supply and cold air return ductwork, and its ld air return and the tightness of duct joints.			
7. OCCUP	PANCY			
Is basement	/lowest level occupied? Full-time Occa	asionally	Seldom	Almost Never
<u>Level</u>	General Use of Each Floor (e.g., familyro	om, bedro	om, laundry, wo	orkshop, storage)
Basement				
1 st Floor				
2 nd Floor				
3 rd Floor				
4 th Floor				
8. FACTOR	RS THAT MAY INFLUENCE INDOOR AIR (QUALITY	Ž	
	e an attached garage?		Y/N	
b. Does th	ne garage have a separate heating unit?		Y/N/NA	
	roleum-powered machines or vehicles in the garage (e.g., lawnmower, atv, car)		Y / N / NA Please specify_	
d. Has the	e building ever had a fire?		Y/N When?	
e. Is a ker	osene or unvented gas space heater present?		Y/N Where	?
f. Is there	a workshop or hobby/craft area?	Y / N	Where & Type	?
g. Is there	smoking in the building?	Y / N	How frequently	?
h. Have cl	leaning products been used recently?	Y / N	When & Type?	
i. Have co	smetic products been used recently?	Y / N	When & Type?	

j. Has painting/stai	ining been done	in the last 6 mo	onths? Y/N	Where & Wh	en?		
k. Is there new car	pet, drapes or o	ther textiles?	Y / N	Where & Wh	en?		
l. Have air freshen	ers been used re	Y / N	When & Typ	e?			
m. Is there a kitch	en exhaust fan?		Y/N	If yes, where	vented?		
n. Is there a bathr	oom exhaust far	n?	Y / N	If yes, where	vented?		
o. Is there a clothe	s dryer?		Y/N	If yes, is it ve	ented outside? Y / N		
p. Has there been a	a pesticide appli	cation?	Y/N	When & Typ	e?		
Are there odors in If yes, please desc	_		Y/N				
Do any of the buildin (e.g., chemical manufa boiler mechanic, pesti	acturing or laboracide application,	tory, auto mech cosmetologist	anic or auto body		•		
If yes, what types of	f solvents are use	d?					
If yes, are their clothes washed at work? Y / N							
Do any of the building response)	ig occupants reg	ularly use or w	ork at a dry-clea	nning service?	(Circle appropriate		
Yes, use dry-c	cleaning regularly cleaning infreque a dry-cleaning ser	No Unknown					
Is there a radon mitig		r the building/s Active/Passive		Date of Instal	llation:		
9. WATER AND SE	WAGE						
Water Supply:	Public Water	Drilled Well	Driven Well	Dug Well	Other:		
Sewage Disposal:	Public Sewer	Septic Tank	Leach Field	Dry Well	Other:		
10. RELOCATION I	NFORMATION	N (for oil spill r	esidential emerg	ency)			
a. Provide reason	s why relocation	n is recommend	led:				
b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel							
c. Responsibility	for costs associa	ted with reimb	ursement explain	ned? Y/N	I		
d. Relocation package provided and explained to residents?					Y / N		

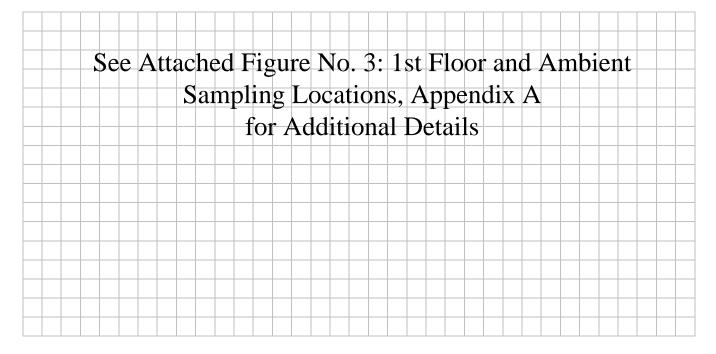
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



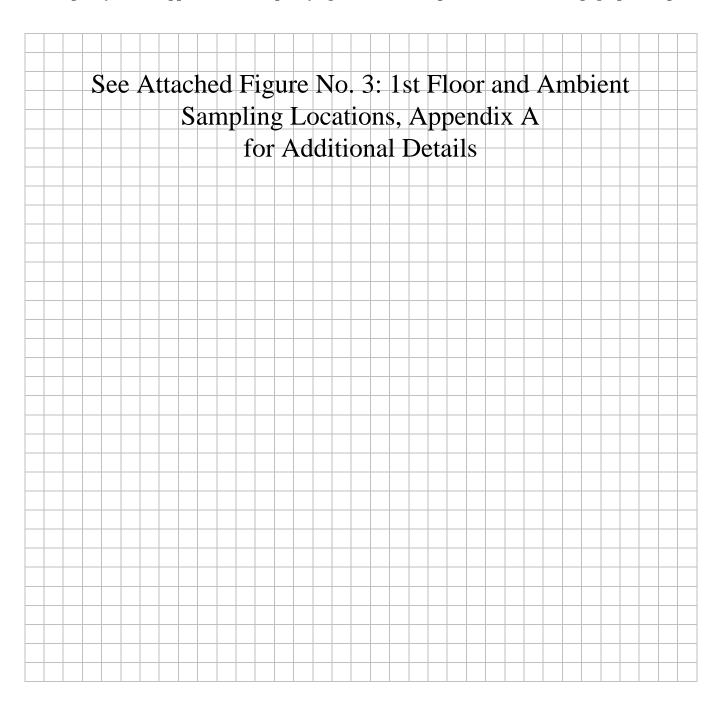
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13	PR	ODI	CT	INVE	NTORY	FORM

Make & Model of field instrument used:	
List specific products found in the residence that have the potential to affect indoor air quali	ty.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y/N
	No Chemical	s of (Concern	Were Observed Wit	hin	
	Close Proxim	ity c	f the Sa	mpling Locations at	the	
		Ti	me of In	spection		
						<u> </u>

^{*} Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

^{**} Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Attachment #5 Material Safety Data Sheets

POLY-AMERICA L. P. 2000 WEST MARSHALL DRIVE GRAND PRAIRIE, TEXAS 75051

PRODUCT

POLYETHYLENE SHEETING-NATURAL

Poly-America L. P. urges each customer or recipient of this Material Safety Data Sheet to study it carefully to become aware of and understand the potential hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire prevention, as necessary or appropriate, to use and understand the data contained in this MSDS.

NOTICE:

This product is not FDA, CPSC or NSF compliant. It is unsuitable for use in applications with respect to direct or indirect food contact, toys, medical devices, or pharmaceutical applications, or for potable water application.

SECTION I	Identification		
	CAS No.	% by wt.	
Polyethylene Copolymer	26221-73-8	95-100	
Polyethylene	9002-88-4	95-100	
Calcium Carbonate	1317-65-3	0-5	
SECTION II	Hazards Identifica	tion	

Primary routes of entry are skin contact and inhalation of dust. Skin contact and inhalation are low health risks because any potentially hazardous components are encapsulated. If adequate ventilation is not available in recycling areas, respiratory protection is recommended for potentially hazardous and/or nuisance dust. The PEL for nuisance dust is 5mg/cu.m.

SECTION III First Aid Measures

If dust should get into the eyes, use available eye wash and get medical attention. If excess dust is present, use proper respiratory protection.

SECTION IV Fire Fighting Measures	NFPA: Health 0; Fire1: Reactivity 0; Others:
-----------------------------------	--

The flash point of this material is over 600° F. If a fire should occur, Carbon Monoxide (CO) and irritating smoke may be produced. Wear NIOSH approved self-contained breathing apparatus when fighting fires in enclosed areas. Fight fire with water, COs, or dry chemicals. Use flooding quantities of water until well after the fire is out.

SECTION V Handling and Storage

This product is normally shipped on pallets in boxes. These pallets should not be stacked more than (3) high. The boxes and plastic film will burn in the presence of an open flame. Do not weld or use open flame in areas in which product is stored without proper fire fighting prevention procedures and equipment.

Cadmium Compounds

Lead Compounds

SECTION VI

Physical and Chemical Properties

This products is a film sheeting with a VOC content of less than 5 parts per million. Density will vary depending on color and components from 0.900 to 1.10. Therefore, the product can sink or float in water depending on the properties. The product is not soluble in water and is odorless at ambient temperature. During heating, an intrinsic plastic odor will be present.

SECTION VII

Stability and Reactivity

This product is stable and non-reactive. Hazardous decomposition of products can occur if overheated or ignited.

SECTION VIII

Toxicological Information

The following chemicals are listed as known or suspected carcinogens per the National Toxicology Program (NTP), International Agency for Cancer Research (IARC), or California Proposition 65:

Antimony Trioxide Aresenic (Inorganic)
Chromium Compounds Di (ethylhexyl) Phthalate

Nickel Compounds Crystalline silica

However, none of these chemicals is present in reportable weights in this product.

SECTION IX

Disposal Measures

This product is non-hazardous as shipped. If grinding occurs in recycling, some of the encapsulated components may present an environmental disposal problem. Refer to applicable federal, state and local regulations.

SECTION X

Transportation

This product is not a regulated substance under the Department of Transportation (DOT) regulations. Any hazardous components are encapsulated.

SECTION XI

Regulatory Information

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. The following specific information is made for purpose of complying with numerous federal, state and local law regulations.

Sara 313 Information: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" (SARA Title III) and is considered, under applicable conditions, to meet the following categories: Not to be listed in any hazard category.

Toxic Substances Control Act (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

State Right-to-Know: This product is not known to contain any substances subject to disclosure requirements of New Jersey, Pennsylvania and/or California.

OSHA Hazard Communication Standard: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 DFR 1910.1200.

SECTION XII

Other Information

National Fire Protection Association (NFPA) ratings:

Health 0 Flammability 1 Reactivity 0

The opinions expressed are those of qualified experts within Poly-America L. P. We believe that the information contained is current as of the date of this Materials Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Poly-America L. P., it is the user's obligation to determine the conditions of safe use of this product.

Prepared by: Safety/Environmental Coordinator

Revised Date: July 16, 2007

Emergency Phone Number:

Monday-Friday 1-800-527-3322 ext. 7215 Weekends & Nights 1-800-527-3322 ext. 7241



PRODUCT AND COMPANY IDENTIFICATION

Product Name Nashua Duct Tape

Use/Size Polymer Based Pressure Sensitive Adhesive

Product Numbers 300, 333, 345, 351, 354, 357, 365, 392, 393, 394, 395, 396, 398,

399

Manufacturer/Supplier Covalence Adhesives
Address 25 Forge Parkway
Franklin, MA 02038

Phone Number (800) 248-7659 (Monday – Friday 8:00 am to 5:00 pm)

Chemtrec Number (800) 424-9300

Revision Date:

MSDS Date: August 10, 2006

This MSDS has been compiled in accordance with - EC Directive 91/155/EC - OSHA's Hazcom Standard (29 CFR 1910.1200)

COMPOSITION/INFORMATION ON THE COMPONENTS

Component Name	CAS#/Codes	Concentration	R Phrases	Classification
Polymers and Rubbers	N.A.	<20%	None	None
Hydrocarbon resin	N.A.	<25%	None	None
Inorganic Compound(s)	N.A.	<30%	None	None
Quartz	14808-60-7	<1%	None	None

3. HAZARD IDENTIFICATION

EU Main Hazards

Not classified as hazardous.

Routes of Entry

- Inhalation - Skin contact

Carcinogenic Status

See Section 11 for information.

Target Organs

- Skin

Health Effects - Eyes

Contact may cause irritation due to mechanical abrasion.

Health Effects - Skin

Prolonged, repeated contact with adhesive may cause skin irritation.

Health Effects - Ingestion

Not an expected route of entry during normal handling and use.

Health Effects - Inhalation

Prolonged, repeated inhalation of adhesive may cause dizziness and drowsiness.

Revision Date: August 10, 2006 Page 1 of 6



4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash skin thoroughly with soap and water. Obtain medical attention if blistering occurs or redness persists.

Ingestion

Obtain medical attention immediately.

Inhalation

Remove person to fresh air. Seek medical attention if symptoms persist.

Advice to Physicians

Treat symptomatically.

FIRE FIGHTING MEASURES

Extinguishing Media

Water spray, carbon dioxide and dry chemical.

Unusual Fire and Explosion Hazards

Can release hazardous vapors during a fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

No specific measures necessary. Prevent the material from entering drains or watercourses.

HANDLING AND STORAGE

Keep away from heat and sources of ignition. Exposure to high heat or flame can release irritating and toxic fumes. Storage area should be: - cool - dry - well ventilated - away from incompatible materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

Exposure limits are listed below, if they exist.

Polymers and Rubbers

None established

Hydrocarbon Resin

None established

Quartz

ACGIH TLV for Quartz (silica-crystalline) is 0.05 mg/m3 measured as respirable fraction of the aerosol

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Control Measures

No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

Respiratory Protection

Respiratory protection not normally required.

Hand Protection

Not required under normal conditions of use. However, care should be taken to avoid contact with the adhesive.

Eye Protection

Safety glasses

Body Protection

Normal work wear.

PHYSICAL AND CHEMICAL PROPERTIES

Physical State Polymer and cloth backing with a polymer based pressure

sensitive adhesive

Color Varied Odor Slight

pH Not applicable
Specific Gravity No data available
Boiling Range/Point (°C/F) Not applicable
Melting Point (°C/F) Not applicable
Flash Point (PMCC) (°C/F) Not known

Explosion Limits (%)

Vapor Pressure

Density

No data available

Not applicable

No data.

Solubility in Water

Vapor Density (Air = 1)

Not applicable

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

- Heat - High temperatures

Materials to Avoid

Acids – bases – strong oxidizers

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

 oxides of carbon – hydrocarbons – partially oxidized hydrocarbons – traces of alphaethylacrolein and formaldehyde – aldehydes – acrolein – waxes – oligomers – oxygenated hydrocarbons – oxides of nitrogen

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11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Low order of acute toxicity.

Chronic Toxicity/Carcinogenicity

This product is not expected to cause long term adverse health effects.

For "inhalable" crystalline silica (quartz): IARC Overall Evaluation is 1 (carcinogenic to humans), the quartz in this formulation is in an adhesive matrix and is not expected to be "inhalable"

Genotoxicity

This product is not expected to cause any mutagenic effects.

Reproductive/Developmental Toxicity

This product is not expected to cause adverse reproductive effects.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

The product may be harmful to aquatic organisms.

DISPOSAL

Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data UN Proper Shipping NameNot Regulated
Not Regulated

UN Class None.
UN Number None.
UN Packaging Group None.

Classification for AIR Consult current IATA Regulations prior to shipping by air.

Transportation (IATA)

15. REGULATORY INFORMATION

EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

EC Annex I Classification

According to EC Commission Directive 67/548/EEC this product is not classified.

R phrases

None.

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15. REGULATORY INFORMATION

S phrases

None.

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Inventory.

EINECS Listing

All ingredients in this product have not been verified for inclusion on the European Inventory of Existing Commercial Chemical Substances (EINECS) or specifically exempted.

DSL (Canadian) Listing

All ingredients in this product have not been verified for inclusion on the Domestic Substance List (DSL).

MA Right To Know Law

This product contains the following chemicals on the Massachusetts Right to Know Law: - Quartz (14808-60-7) <1% - Titanium Dioxide (13463-67-7) <2% - BHT (128-37-0) <1% - Amorphous Silica (7631-86-9) <1%

PA Right To Know Law

This product contains the following chemicals on the Pennsylvania Hazardous Substance List: --- Quartz (14808-60-7) <1% – Titanium Dioxide (13463-67-7) <2% – BHT (128-37-0) <1% – Amorphous Silica (7631-86-9) <1%

NJ Right To Know Law

This product contains the following chemicals on the New Jersey Workplace Hazardous Substance List: - Quartz (14808-60-7) <1% – Titanium Dioxide (13463-67-7) <2% – BHT (128-37-0) <1% – Amorphous Silica (7631-86-9) <1%

California Proposition 65

This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: — Quartz (14808-60-7) <1% - Arsenic (7440-38-2) <1ppm — Lead (7439-92-1) <1 ppm — Carbon black (1333-86-4) < 0.1%

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.

SARA Title III Sect. 311/312 Categorization

Immediate (acute)

SARA Title III Sect. 313

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations. - none

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 0

NFPA Code for Health - 1

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - 0

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16. OTHER INFORMATION

HMIS Ratings

HMIS Code for Flammability - 0

HMIS Code for Health - 1

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk S: Safety

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

BOD: Biological Oxygen Demand

KoC: Soil Organic Carbon Partition Coefficient

For further Information email: Technical.Adhesives@covcorp.com

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