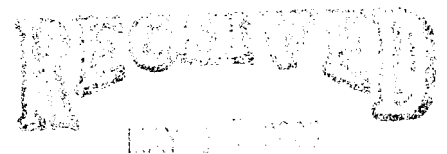




GeoLogic NY, Inc.

P.O. Box 350 • 37 Copeland Ave. • Homer, NY 13077 • 607.749.5000 • Fax: 607.749.5063

**Soil Vapor Sampling and Sub-Slab Depressurization
Owego Heat Treat, Inc.
Marshland Road
Apalachin, New York
Record of Decision Site # 7-54-011**



Prepared For:

Owego Heat Treat, Inc.

NYSDDEC - REGION 7
KIRKWOOD SUB-OFFICE

Prepared By:

GeoLogic NY, Inc.

May 2006
Project No. 98081

**Soil Vapor Sampling and Sub-Slab Depressurization
Owego Heat Treat, Inc.
Marshland Road
Apalachin, New York
Record of Decision Site # 7-54-011**

This report presents the findings from soil vapor sampling and documents the installation of sub-slab depressurization systems at Owego Heat Treat (OHT) in February and March 2006. This work was performed in accordance with the Work Plan submitted to the New York State Department of Environmental Conservation (NYSDEC) on January 30, 2006 and approved verbally by Tom Suozzo of the NYSDEC on February 3, 2006.

BACKGROUND INFORMATION

The contaminants of concern at the site include tetrachloroethylene (PCE), the original solvent used on-site, and trichloroethylene (TCE), from a more recent spill on the site and also found as a breakdown product or contaminant of the tetrachloroethylene. OHT switched from using tetrachloroethylene to trichloroethylene in 1985, and switched from using TCE to n-propyl bromide on December 6, 2005.

OHT is currently operating several remedial systems to remediate past spills of PCE and TCE. The PCE spill is centered on building B-2 and remedial systems include a groundwater pump and treat system and a soil vapor extraction system below building B-2. The TCE spill occurred at building B-5 and there is a soil vapor extraction system on the south side of the building to remediate the TCE spill.

The extent of groundwater contamination has been defined, and there is a well-defined narrow contaminant plume at the site, which trends north-south and is flowing to the north. The nearest off-site home is over 300 feet east of the edge of the plume in a cross-gradient direction. An air photo in Appendix A (Drawing No. 1) depicts the location of the site in relation to nearby homes.

OBJECTIVE OF WORK

The objective of the work performed was to evaluate potential migration of PCE and TCE into off-site and on-site buildings, and minimize migration of PCE and TCE into on-site buildings located over the contaminant plume.

SOIL VAPOR MONITORING

The locations for the four soil vapor monitoring points that were used to evaluate the potential for off-site migration of contaminants in soil-gas are shown on Drawing No. 1 in Appendix A; two on the east side of the property (GP-3 and GP-4) and two on the west side of the property (GP-1 and GP-2). Soil vapor samples were taken from these locations on February 9 and 10, 2006 following the procedures described in Appendix C. The analytical results are in Appendix B.

To evaluate potential migration of soil-gas contaminants into buildings, sub-slab soil vapor and indoor air samples were obtained in buildings B-4, B-6 and H-2 on February 9, 2006 following the procedures described in Appendix C. One ambient air sample was also obtained south of building H-1 at the time the sub-slab and indoor air samples were taken. Product Inventory Forms are in Appendix D. Owego Heat Treat had a spill of Condursal Thinner, which contains xylene and ethylbenzene, in their laboratory in building B-4 on February 9, 2006 (MSDS of Condursal Thinner is in Appendix D). Therefore, the laboratory did not include xylenes or ethylbenzene in the analysis of the indoor air

sample from building B-4.

Soil vapor and sub-slab samples were analyzed by Buck Environmental Laboratories, Inc. for chlorinated volatile organics using EPA Method TO-15. Indoor and ambient air samples were analyzed using EPA Method TO-15 using SIM acquisition to achieve a lower detection limit.

The results are summarized on Table 1 along with the soil-gas sample results. Trichloroethene (TCE) and 1,1,1-Trichloroethane (1,1,1-TCA) were not detected above the reporting limits in any of the four soil-gas samples, and concentrations of PCE in the four soil-gas samples were less than 10 ug/m³. TCE was only detected above the reporting limit in the indoor air sample from B-6. Since TCE was not detected in the sub-slab sample, and this building is a shop with numerous indoor air sources of chemicals, the TCE detected in the sample is attributed to chemicals in use in the building (see Appendix D). Concentrations of PCE and 1,1,1-TCA in the sub-slab and soil vapor samples were all less than 30 ug/m³ and indoor air results for these compounds were all less than 3 ug/m³. Based on these concentrations and NYSDOH guidelines¹, no additional testing is required.

SUB-SLAB DEPRESSURIZATION SYSTEMS

Sub-slab depressurization systems were installed in buildings H-1, B-1, B-3 and B-5. The purpose of the sub-slab depressurization systems is to minimize the potential for migration of TCE or PCE into the buildings over the groundwater contaminant plume by maintaining a depressurized zone below the full extent of the basement slab compared to the ambient air pressure above the slab. Table no. 2 contains descriptions of the buildings where the sub-slab depressurization systems were installed.

To provide optimum pressure field extension of the sub-slab communication zone, material was excavated from the area immediately below the slab penetration point of system vent pipes to a depth of at least 10 inches with a diameter of at least four inches. The slab penetrations were 4 inches in diameter.

The suction points were permanently sealed in the concrete floor and all joints/connections were made airtight by sealing with adhesives. All piping was 4-inch diameter PVC. The vent pipes were installed in a configuration to ensure that any rainwater or condensation within the pipes drains downward into the ground beneath the slab. The locations of the blowers are shown on Drawing No. 2, Appendix A. In Building B-5, the SVE blower was connected to the extraction points on the south side of the building and a separate blower was connected to the points on the west side of the building.

Vent fans used in the sub-slab depressurization unit were designed to reduce the potential for leakage of soil-gas from the fan housing. Vent fans were installed on the exterior of the buildings in vertical runs of the vent pipe to avoid condensation buildup in the fan housing. They are equipped with a magnehelic gauge that measures vacuum in the system.

After installation, vacuums were measured to assure that the systems were operating properly. Each system was operated for one hour and then a test of pressure field extension was performed. The pressure field extension test consisted of drilling a small (less than 0.5 inch) pilot hole at three to six locations in the buildings, depending on the building configurations. The vacuum was measured at these points using a vacuum meter attached to tubing. Vacuum measurements are summarized on Table 3. All vacuum measurements were more than one pascal, indicating the systems are creating sufficient vacuum to minimize the potential for in-flow of vapors into the building.

Since there is a soil vent system below building B-2, a sub-slab depressurization system was not installed in this building

CONCLUSIONS

Off-Site Migration of Vapors

Soil vapor monitoring indicates there is limited potential for off-site migration of PCE and TCE. TCE was not detected above the reporting limits in any of the four soil-gas samples, and concentrations of PCE were less than 10 ug/m³.

Migration of Vapors Into On-Site Buildings

There is limited potential for migration of vapors into the eight buildings on-site. Soil vapor monitoring at three of the buildings, H-2, B-4, and B-6, indicates there is limited potential for PCE and TCE to migrate into these buildings. TCE was not detected above the reporting limits in any of the sub-slab samples and only detected in the sample from B-6, the maintenance building where numerous chemicals are used. Concentrations of PCE in the sub-slab samples were less than 30 ug/m³ and in the indoor samples less than 3 ug/m³. According to the NYSDOH guidelines¹, no additional investigation is needed.

Sub-slab depressurization systems were installed in four of the remaining five buildings on the site; H-1, B-1, B-3 and B-5. The fifth building, B-2, has a soil vent system beneath the building. Post startup vacuum measurements in the buildings where the sub-slab depressurization systems were installed were more than one pascal, indicating the systems are creating a sufficient vacuum to prevent vapors from entering the buildings.

References

1. NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Public Comment Draft February 2005.

GeoLogic NY, Inc.



Marjory Rinaldo-Lee
President

cc: File: ..98081/report/soil vapor report

ATTACHMENTS

Tables

Appendix A	Drawings
Appendix B	Analytical Results
Appendix C	Sampling Procedures
Appendix D	Product Inventory Forms

Table 1
Summary of Compounds Detected in Air Samples
Owego Heat Treat
Apalachin, New York

Compound	GP-1 ug/m ³	GP-2 ug/m ³	GP-3 ug/m ³	GP-4 ug/m ³	H-2		B-4		B-6		Ambient ug/m ³
					Sub-Slab ug/m ³	Basement ug/m ³	Sub-Slab ug/m ³	Indoor ug/m ³	Sub-Slab ug/m ³	Indoor ug/m ³	
1,1,1-trichloroethane	<0.82	<0.82	<0.82	<0.82	<0.82	0.11	<0.82	<0.11	4.80	2.4	<0.11
1,2,4-trimethylbenzene	2.46	2.46	1.48	1.18	24.10	NA	17.71	NA	29.02	NA	NA
1,3,5-trimethylbenzene	<0.74	0.74	<0.74	<0.74	5.90	NA	4.72	NA	7.87	NA	NA
benzene	2.21	7.99	9.59	5.75	6.39	0.42	4.16	0.58	5.11	5.75	0.51
dichlorodifluoromethane	1.78	1.48	<0.74	<0.74	1.14	NA	1.44	NA	<0.74	NA	NA
ethylbenzene	4.35	7.39	12.17	8.26	19.99	0.22	15.64	NA	23.03	9.99	0.22
m,p-xylene	8.69	12.17	18.68	12.17	35.63	1.22	29.55	NA	43.45	70.39	1.39
methyl tert-butyl ether	NA	NA	NA	NA	NA	<0.36	NA	<0.36	NA	0.54	<0.36
o-xylene	2.09	4.13	4.78	3.00	19.12	0.19	15.21	NA	22.59	12.17	0.19
styrene	<0.64	0.77	1.19	0.68	<0.64	NA	<0.64	NA	<0.64	NA	NA
tetrachloroethylene	1.63	4.55	9.50	4.55	13.57	NA 0.20	21.72	NA 0.26	16.97	NA <0.14	<0.14
toluene	18.48	30.92	33.56	32.05	56.56	0.75	41.48	NA	60.34	37.71	0.57
trichloroethene	<0.81	<0.81	<0.81	<0.81	<0.81	<0.11	<0.81	<0.11	<0.81	1.24	<0.11
trichlorofluoromethane	<0.84	<0.84	<0.84	<0.84	<0.84	NA	2.08	NA	<0.84	NA	NA
vinyl chloride	<0.38	<0.38	<0.38	<0.38	<0.38	0.18	<0.38	<0.03	<0.38	0.10	<0.03

NA - Not Analyzed

Table 2
Summary of Sub-Slab Depressurization Systems
Owego Heat Treat
Apalachin, New York

Building	Building Description	Number and Location of Suction Points
H-1	Two-story house, with stone foundation covered with plaster and concrete floor.	Sub-slab system installed below concrete floor in basement with two suction points located in central portion of building.
B-1	Barn with concrete block foundation and concrete floor.	Sub-slab system installed below concrete floor in basement with two suction points located in central portion of building.
B-3	Single-story process building with slab-on-grade concrete foundation.	Sub-slab system installed below concrete floor with two suction points located in northwest and southeast corners of building.
B-5	Two-story process and office building with slab-on-grade concrete foundation.	Sub-slab system installed below concrete floor with four suction points; two on north side and two on south side of building.

TABLE 3
SUMMARY OF VACUUM MEASUREMENTS FOR SUB-SLAB DEPRESSURIZATION SYSTEMS
OWEGO HEAT TREAT
APALACHIN, NEW YORK

Building B-1

Test Point	Vacuum Measured Y	
	Inches Water	Pascals
T-1	0.035	8.71
T-2	0.045	11.20
T-3	0.045	11.20

Building B-3

Test Point	Vacuum Measured Y	
	Inches Water	Pascals
T-1	0.06	14.93
T-2	0.25	62.21

Building H-1

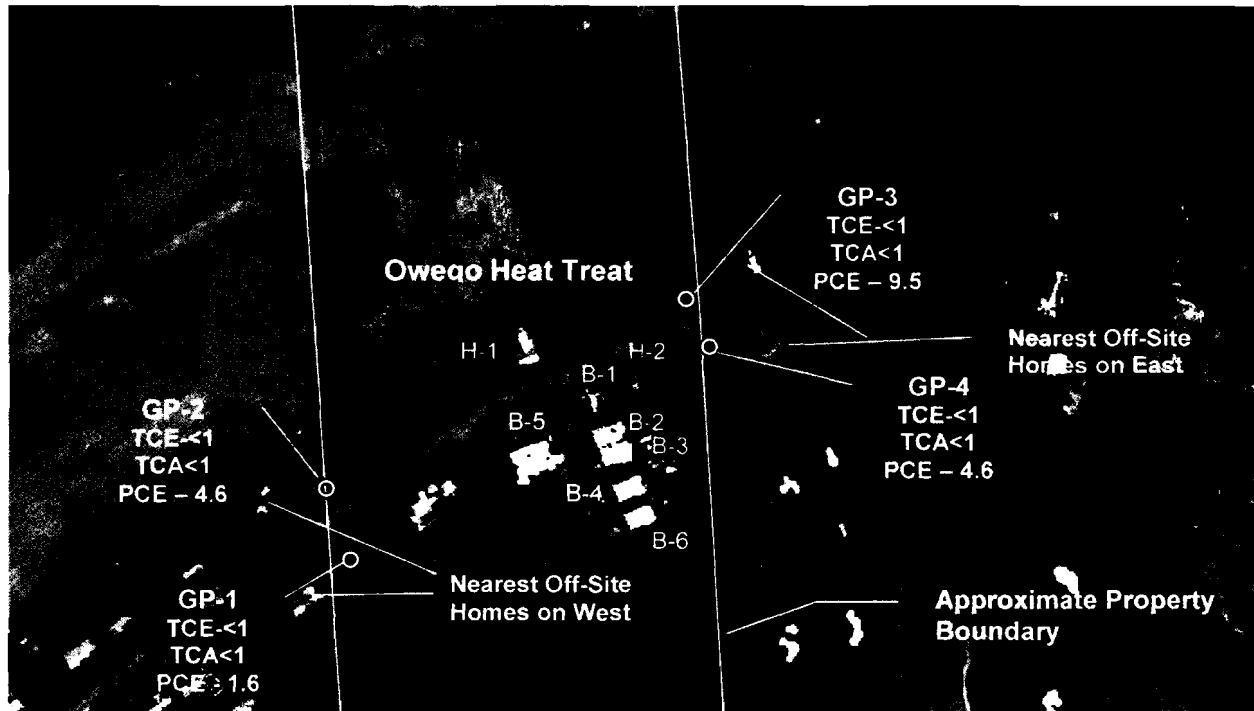
Test Point	Vacuum Measured Y	
	Inches Water	Pascals
T-1	0.01	2.49
T-2	0.01	2.49
T-3	0.01	2.49

Building B-5

Test Point	Vacuum Measured Y	
	Inches Water	Pascals
T-1	0.03	7.47
T-2	0.025	6.22
T-3	0.025	6.22
T-4	0.02	4.98
T-5	0.015	3.73
T-6	0.015	3.73

APPENDIX A
DRAWINGS

APPENDIX A



Notes:

Concentrations are in $\mu\text{g}/\text{m}^3$

TCE – trichloroethylene

TCA – 1,1,1-trichloroethane

PCE – tetrachloroethene

N



GeoLogic

GeoLogic NY, Inc.

SOIL VAPOR SAMPLING LOCATIONS
OWEGO HEAT TREAT, INC.
APALACHIN, NEW YORK

DR. BY:
MRL

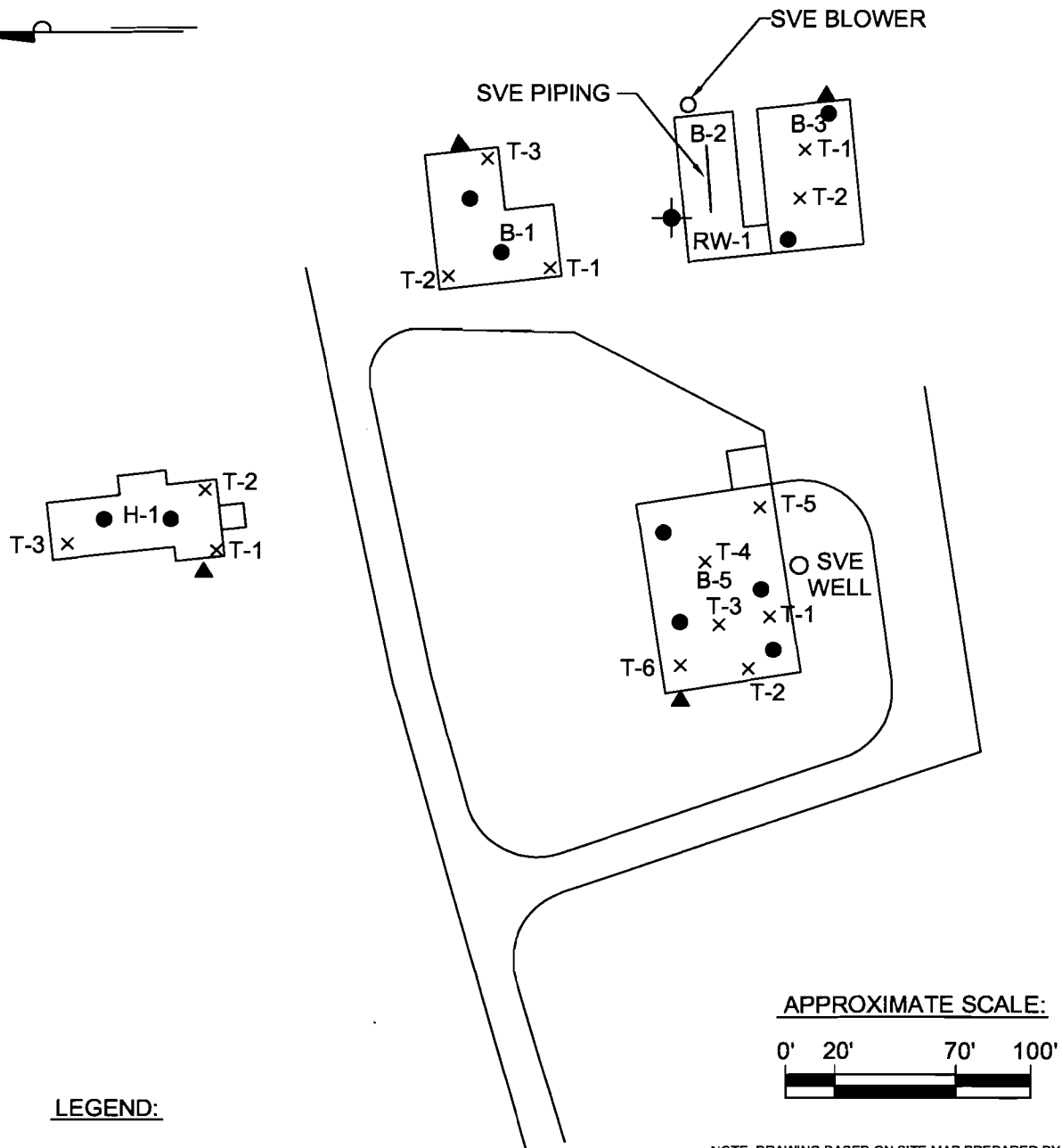
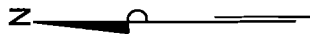
SCALE: N.A.

PROJ. NO.:
98081

REV'D. BY:
SC

DATE: MAR 2006

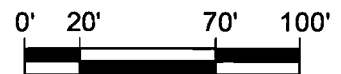
DRWG. NO.:
1



LEGEND:

- ▲ BLOWER
- RECOVERY WELL LOCATION
- EXTRACTION POINT
- × TEST POINT

APPROXIMATE SCALE:



NOTE: DRAWING BASED ON SITE MAP PREPARED BY O'BRIEN & GERE.

GeoLogic

GeoLogic NY, Inc.

SUB-SLAB DEPRESSURIZATION SYSTEM
OWEGO HEAT TREAT, INC.
MARSHALAND ROAD
APALACHIN, NEW YORK

DR. BY:	MRL/SDW	SCALE:	AS SHOWN	PROJ. NO:	98081
REVD BY:		DATE:	MAY 2006	DRWG. NO:	2

APPENDIX B
ANALYTICAL RESULTS



B U C K

ENVIRONMENTAL LABORATORIES, INC.

accredited environmental analysis

Lab Log No.: **0602072**

February 27, 2006

GEOLOGIC NY, INC
PO BOX 350
HOMER, NY 13077-0350

TEL: 607-749-5000
FAX: (607) 749-5063

RE: 98-081

ATTN: Project Manager

Buck Environmental Labs, Inc. received 11 samples on 02/10/06 for the analyses presented in the following report.

The analytical results for your samples are presented on the enclosed laboratory report(s). In accordance with NYSDOH-ELAP and NELAC regulations, we are required to notify you of any aspects of the analysis that did not comply with these regulations. A summary of problems, notations, and non-compliant parameters is presented on the attached "Narrative". Any data qualifiers are noted directly on the laboratory report. The Laboratory also maintains a "Sample Receipt Checklist" and the submitted "Chain of Custody" form in its files that are available on request.

The pagination at the bottom of the narrative and reports indicates the total number of pages in the client submittal. No duplication of this report should be done without duplication of the entire package, including cover letter and narrative.

Thank you for the opportunity to provide these analytical services. Please contact Pamela Davis, Client Services Manager, or Barbara Houskamp, QA/QC Manager, with questions on the analysis.

Sincerely,

John H. Buck, P.E.
Laboratory Director

MAR 03 2006

Buck Environmental Labs, Inc.
3821 Buck Drive, Cortland, NY 13045-5150
Tel 607.753.3403
Fax 607.753.3415
Info@Bucklabs.com

ELAP # 10795
EPA # NY00935



CLIENT: GEOLOGIC NY, INC
Project: 98-081
Lab Order: 0602072

CASE NARRATIVE

All eleven samples were collected by the client in laboratory pre-cleaned and pre-analyzed 6-liter passivated canisters. Sample fractions 01A, 02A, 03A, 04A, 05A, 07A, and 10A were analyzed by EPA TO-15 methodology. Sample fractions 06A, 08A, 09A, and 11A were analyzed by method TO-15 using SIM acquisition to achieve improved detection limits. Sample fraction 08A was not analyzed for ethyl benzene, toluene, or xylenes at the client's request.

All quality control parameters for the analysis of samples under this lab log number met the laboratory acceptance limits and no data were qualified.

Glossary of terms and acronyms used in the lab reports:

CAS - Chemical Abstract Series identification for the analyte.

DF - "1" indicates that there was no dilution. Any other number indicates that the sample was diluted by that factor.

PQL - Practical Quantitation Limit - The lowest level that the lab would report a value.

Result - This is the numerical result of the analysis (in bold). An "ND" indicates that the analyte was not detected at greater than the PQL concentration.

Units - The units of measure for the analysis. Ug/L (ppb) and mg/L (ppm) are for liquid samples. Ug/kg (ppb) and mg/kg (ppm) are for solid based units.

Qual - An entry in this column indicates that the results are "qualified" according to the following codes (generally related to lab QC results):

J - The analyte was detected at less than the PQL, but the amount is not precisely known.

B - The analyte was detected in the lab blank indicating possible contamination.

E - The result is estimated because the measurement exceeded the upper calibration limit.

D - Surrogate recovery was low due to sample dilution.

S - Spike recovery was outside laboratory acceptance limits.

R - RPD was outside laboratory acceptance limits.

H - The measurement is estimated because the sample was analyzed after regulatory holding time expired.

* - The result exceeds the public drinking water maximum contaminant level.

MAR 03 2006



BUCK

ENVIRONMENTAL LABORATORIES, INC.

accredited environmental analysts

MAR 06 2006

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: GP-1

Lab ID: 0602072-01A

Date of Collection: 12/09/06

Container Type: 6L Summa Canister ID# 1104

TO-15 Summa Canister

File Name:	0901009.D	Date of Analysis:	2/17/06 7:29PM
Dilution Factor:	1.00	Analyst:	PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	0.5	2.46
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	Not Detected	Not Detected
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	0.69	2.21
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	0.36	1.78
Ethylbenzene	100-41-4	0.15	0.65	1	4.35
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	2	8.69
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	0.48	2.09
Styrene	100-42-5	0.15	0.64	Not Detected	Not Detected
Tetrachloroethene	127-18-4	0.15	1.02	0.24	1.63
Toluene	108-88-3	0.15	0.57	4.9	18.48
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

This laboratory analysis has been performed in accordance with generally accepted laboratory practices and requirements of the New York State Department of Health ELAP Program. Buck Environmental Laboratories, Inc. makes no recommendations, representations or warranties other than as specifically set forth in this report and shall not be responsible or liable for any action or the consequences of any action taken in connection with this report. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included on the cover letter. See cover letter and lab narrative for further information on this report.

3821 Buck Drive, P.O. Box 5150, Cortland, NY 13045 • 607.753.3403 fax 607.753.3415

Branch Office: 14 Smith Avenue, Binghamton, NY 13904 • 607.771.0866 fax 607.771.0966



BUCK

ENVIRONMENTAL LABORATORIES, INC.

accredited under contract analysis

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: GP-2

Lab ID: 0602072-02A

Date of Collection: 12/09/06

Container Type: 6L Summa Canister ID# 1311

TO-15 Summa Canister

File Name:	0601006.D	Date of Analysis: 2/17/06 5:49PM
Dilution Factor:	1.00	Analyst: PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	0.5	2.46
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	0.15	0.74
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	2.5	7.99
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	0.3	1.48
Ethylbenzene	100-41-4	0.15	0.65	1.7	7.39
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	2.8	12.17
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	0.95	4.13
Styrene	100-42-5	0.15	0.64	0.18	0.77
Tetrachloroethene	127-18-4	0.15	1.02	0.67	4.55
Toluene	108-88-3	0.15	0.57	8.2	30.92
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

This laboratory analysis has been performed in accordance with generally accepted laboratory practices and requirements of the New York State Department of Health ELAP Program. Buck Environmental Laboratories, Inc. makes no recommendations, representations or warranties other than as specifically set forth in this report and shall not be responsible or liable for any action or the consequences of any action taken in connection with this report. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included on the cover letter. See cover letter and lab narrative for further information on this report.

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BUCK

ENVIRONMENTAL LABORATORIES, INC.

accredited environmental analysis

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: GP-3

Lab ID: 0602072-03A

Date of Collection: 12/09/06

Container Type: 6L Summa Canister ID# 1100

TO-15 Summa Canister

File Name:	0501005.D	Date of Analysis:	2/17/06 5:16PM
Dilution Factor:	1.00	Analyst:	PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	0.3	1.48
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	Not Detected	Not Detected
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	3	9.59
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	Not Detected	Not Detected
Ethylbenzene	100-41-4	0.15	0.65	2.8	12.17
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	4.3	18.68
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	1.1	4.78
Styrene	100-42-5	0.15	0.64	0.28	1.19
Tetrachloroethene	127-18-4	0.15	1.02	1.4	9.50
Toluene	108-88-3	0.15	0.57	8.9	33.56
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

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BUCK

ENVIRONMENTAL LABORATORIES, INC.

Accredited environmental analysis

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: GP-4

Lab ID: 0602072-04A

Date of Collection: 12/10/06

Container Type: 6L Summa Canister ID# 1308

TO-15 Summa Canister

File Name:	0701007.D	Date of Analysis:	2/17/06 6:23PM
Dilution Factor:	1.00	Analyst:	PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	0.24	1.18
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	Not Detected	Not Detected
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	1.8	5.75
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	Not Detected	Not Detected
Ethylbenzene	100-41-4	0.15	0.65	1.9	8.26
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	2.8	12.17
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	0.69	3.00
Styrene	100-42-5	0.15	0.64	0.16	0.68
Tetrachloroethene	127-18-4	0.15	1.02	0.67	4.55
Toluene	108-88-3	0.15	0.57	8.5	32.05
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

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BUCK

ENVIRONMENTAL LABORATORIES, INC.

*accredited environmental analysts***Client:** GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081**Sample Name:** H-2 SUBSLAB**Lab ID:** 0602072-05A**Date of Collection:** 12/10/06**Container Type:** 6L Summa Canister ID# 1244**TO-15 Summa Canister**

File Name:	0801008.D	Date of Analysis: 2/17/06 6:56PM
Dilution Factor:	1.00	Analyst: PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	4.9	24.10
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	1.2	5.90
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	2	6.39
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	0.23	1.14
Ethylbenzene	100-41-4	0.15	0.65	4.6	19.99
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	8.2	35.63
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	4.4	19.12
Styrene	100-42-5	0.15	0.64	Not Detected	Not Detected
Tetrachloroethene	127-18-4	0.15	1.02	2	13.57
Toluene	108-88-3	0.15	0.57	15	56.56
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

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BUCK

ENVIRONMENTAL LABORATORIES, INC.

Accredited environmental analysis

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: H-2 BASEMENT

Lab ID: 0602072-06A

Date of Collection: 12/10/06

Container Type: 6L Summa Canister ID# 1180

TO-15 Summa Canister SIM Analysis

File Name:	1101011.D	Date of Analysis: 2/24/06 3:56 PM
Dilution Factor:	1.00	Analyst: P.A.I.

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.02	0.11	0.021	0.11
1,1,2,2-Tetrachloroethane	79-34-5	0.02	0.14	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.02	0.11	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.02	0.08	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.01	0.04	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.02	0.08	Not Detected	Not Detected
Benzene	71-43-2	0.05	0.16	0.13	0.42
cis-1,2-Dichloroethene	156-59-2	0.02	0.08	Not Detected	Not Detected
Ethylbenzene	100-41-4	0.02	0.09	0.051	0.22
m,p-Xylene	1330-20-7	0.04	0.35	0.14	1.22
Methyl tert-butyl ether	1634-04-4	0.10	0.36	Not Detected	Not Detected
o-Xylene	95-47-6	0.02	0.09	0.044	0.19
Tetrachloroethene	127-18-4	0.02	0.14	0.03	0.20
Toluene	108-88-3	0.02	0.08	0.2	0.75
trans-1,2-Dichloroethene	156-60-5	0.10	0.40	Not Detected	Not Detected
Trichloroethene	79-01-6	0.02	0.11	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.01	0.03	0.069	0.18

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[Handwritten signature]
2/24/06

**B U C K**

ENVIRONMENTAL LABORATORIES, INC.

accredited environmental analysts

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: B-4 SUBSLAB

Lab ID: 0602072-07A

Date of Collection: 12/10/06

Container Type: 6L Summa Canister ID# 1108

TO-15 Summa Canister

File Name:	0401004.D	Date of Analysis: 2/17/06 4:22PM
Dilution Factor:	1.00	Analyst: PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	3.6	17.71
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	0.96	4.72
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	1.3	4.16
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	0.29	1.44
Ethylbenzene	100-41-4	0.15	0.65	3.6	15.64
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	6.8	29.55
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	3.5	15.21
Styrene	100-42-5	0.15	0.64	Not Detected	Not Detected
Tetrachloroethene	127-18-4	0.15	1.02	3.2	21.72
Toluene	108-88-3	0.15	0.57	11	41.48
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	0.37	2.08
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

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BUCK

ENVIRONMENTAL LABORATORIES, INC.

accredited environmental analysis

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: B-4 INDOOR

Lab ID: 0602072-08A

Date of Collection: 12/10/06

Container Type: 6L Summa Canister ID# 1182

TO-15 Summa Canister SIM Analysis

File Name:	0901009.D	Date of Analysis: 2/24/06 2:50 PM
Dilution Factor:	1.00	Analyst: P.A.I.

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.02	0.11	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.02	0.14	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.02	0.11	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.02	0.08	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.01	0.04	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.02	0.08	Not Detected	Not Detected
Benzene	71-43-2	0.05	0.16	0.18	0.58
cis-1,2-Dichloroethene	156-59-2	0.02	0.08	Not Detected	Not Detected
Methyl tert-butyl ether	1634-04-4	0.10	0.36	Not Detected	Not Detected
Tetrachloroethene	127-18-4	0.02	0.14	0.038	0.26
trans-1,2-Dichloroethene	156-60-5	0.10	0.40	Not Detected	Not Detected
Trichloroethene	79-01-6	0.02	0.11	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.01	0.03	Not Detected	Not Detected

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MAR 03 2007

**B U C K**

ENVIRONMENTAL LABORATORIES, INC.

*accredited environmental analysis***Client:** GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081**Sample Name:** AMBIENT**Lab ID:** 0602072-09A**Date of Collection:** 12/10/06**Container Type:** 6L Summa Canister ID# 1101**TO-15 Summa Canister SIM Analysis**

File Name:	0801008.D	Date of Analysis: 2/24/06 2:16 PM
Dilution Factor:	1.00	Analyst: P.A.I.

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.02	0.11	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.02	0.14	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.02	0.11	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.02	0.08	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.01	0.04	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.02	0.08	Not Detected	Not Detected
Benzene	71-43-2	0.05	0.16	0.16	0.51
cis-1,2-Dichloroethene	156-59-2	0.02	0.08	Not Detected	Not Detected
Ethylbenzene	100-41-4	0.02	0.09	0.051	0.22
m,p-Xylene	1330-20-7	0.04	0.35	0.16	1.39
Methyl tert-butyl ether	1634-04-4	0.10	0.36	Not Detected	Not Detected
o-Xylene	95-47-6	0.02	0.09	0.043	0.19
Tetrachloroethene	127-18-4	0.02	0.14	Not Detected	Not Detected
Toluene	108-88-3	0.02	0.08	0.15	0.57
trans-1,2-Dichloroethene	156-60-5	0.10	0.40	Not Detected	Not Detected
Trichloroethene	79-01-6	0.02	0.11	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.01	0.03	Not Detected	Not Detected

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BUCK

ENVIRONMENTAL LABORATORIES, INC.

*unconfined environmental analysis***Client:** GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081**Sample Name:** B-6 SUBSLAB**Lab ID:** 0602072-010A**Date of Collection:** 12/10/06**Container Type:** 6L Summa Canister ID# 1183**TO-15 Summa Canister**

File Name:	1001010.D	Date of Analysis: 2/17/06 8:05PM
Dilution Factor:	1.00	Analyst: PAI

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.15	0.82	0.88	4.80
1,1,2,2-Tetrachloroethane	79-34-5	0.15	1.03	Not Detected	Not Detected
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.15	1.15	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.82	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.61	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.15	0.60	Not Detected	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.00	14.85	Not Detected	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.74	5.9	29.02
1,2-Dibromoethane	106-93-4	0.15	1.15	Not Detected	Not Detected
1,2-Dichlorobenzene	95-50-1	0.15	0.90	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.15	0.61	Not Detected	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.69	Not Detected	Not Detected
1,2-Dichlorotetrafluoroethane	76-14-2	0.15	1.05	Not Detected	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.74	1.6	7.87
1,3-Dichlorobenzene	541-73-1	0.15	0.90	Not Detected	Not Detected
1,4-Dichlorobenzene	106-46-7	0.15	0.90	Not Detected	Not Detected
Benzene	71-43-2	0.15	0.48	1.6	5.11
Benzyl chloride	100-44-7	0.15	0.78	Not Detected	Not Detected
Bromomethane	74-83-9	0.15	0.58	Not Detected	Not Detected
Carbon tetrachloride	56-23-5	0.15	0.94	Not Detected	Not Detected
Chlorobenzene	108-90-7	0.15	0.69	Not Detected	Not Detected
Chloroethane	75-00-3	0.15	0.40	Not Detected	Not Detected
Chloroform	67-66-3	0.15	0.73	Not Detected	Not Detected
Chloromethane	74-87-3	2.00	4.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.60	Not Detected	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.15	0.68	Not Detected	Not Detected
Dichlorodifluoromethane	75-71-8	0.15	0.74	Not Detected	Not Detected
Ethylbenzene	100-41-4	0.15	0.65	5.3	23.03
Hexachlorobutadiene	87-68-3	2.00	21.34	Not Detected	Not Detected
m,p-Xylene	1330-20-7	0.30	1.30	10	43.45
Methylene chloride	75-09-2	0.15	0.52	Not Detected	Not Detected
o-Xylene	95-47-6	0.15	0.65	5.2	22.59
Styrene	100-42-5	0.15	0.64	Not Detected	Not Detected
Tetrachloroethene	127-18-4	0.15	1.02	2.5	16.97
Toluene	108-88-3	0.15	0.57	16	60.34
trans-1,3-Dichloropropene	10061-02-6	0.15	0.68	Not Detected	Not Detected
Trichloroethene	79-01-6	0.15	0.81	Not Detected	Not Detected
Trichlorofluoromethane	75-69-4	0.15	0.84	Not Detected	Not Detected
Vinyl chloride	75-01-4	0.15	0.38	Not Detected	Not Detected

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Branch Office: 14 Smith Avenue, Binghamton, NY 13904 • 607.771.0866 fax 607.771.0966



BUCK

ENVIRONMENTAL LABORATORIES, INC.

unmatched environmental analysis

Client: GeoLogic NY, Inc.

PO Box 350

Homer NY 13077-0350

Project: 98-081

Sample Name: B-6 INDOOR

Lab ID: 0602072-11A

Date of Collection: 12/10/06

Container Type: 6L Summa Canister ID# 1310

TO-15 Summa Canister SIM Analysis

File Name:	1001010.D	Date of Analysis: 2/24/06 3:23 PM
Dilution Factor:	1.00	Analyst: P.A.I.

Compound	CAS No.	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
1,1,1-Trichloroethane	71-55-6	0.02	0.11	0.44	2.40
1,1,2,2-Tetrachloroethane	79-34-5	0.02	0.14	Not Detected	Not Detected
1,1,2-Trichloroethane	79-00-5	0.02	0.11	Not Detected	Not Detected
1,1-Dichloroethane	75-34-3	0.02	0.08	Not Detected	Not Detected
1,1-Dichloroethene	75-35-4	0.01	0.04	Not Detected	Not Detected
1,2-Dichloroethane	107-06-2	0.02	0.08	Not Detected	Not Detected
Benzene	71-43-2	0.05	0.16	1.8	5.75
cis-1,2-Dichloroethene	156-59-2	0.02	0.08	Not Detected	Not Detected
Ethylbenzene	100-41-4	0.02	0.09	2.3	9.99
m,p-Xylene	1330-20-7	0.04	0.35	8.1	70.39
Methyl tert-butyl ether	1634-04-4	0.10	0.36	0.15	0.54
o-Xylene	95-47-6	0.02	0.09	2.8	12.17
Tetrachloroethene	127-18-4	0.02	0.14	Not Detected	Not Detected
Toluene	108-88-3	0.02	0.08	10	37.71
trans-1,2-Dichloroethene	156-60-5	0.10	0.40	Not Detected	Not Detected
Trichloroethene	79-01-6	0.02	0.11	0.23	1.24
Vinyl chloride	75-01-4	0.01	0.03	0.038	0.10

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APPENDIX C
SAMPLING PROCEDURES

SOIL VAPOR SAMPLING PROCEDURES

Soil Vapor Samples

Soil vapor samples were obtained from soil vapor implants installed at the four locations shown on the air photo. A truck-mounted, direct push sampler was used to install the soil vapor implants at a depth of eight feet below the ground surface. Soil vapor implants were constructed of six-inch long, double woven stainless steel wire screen. The stainless steel implants were connected to polyethylene tubing. The direct-push sampling rods were advanced to a depth of eight feet at GP-1, GP-3 and GP-4. Since groundwater was encountered at a depth of six feet below ground surface at GP-2, the implant was placed at a depth of 4 ½ feet below ground surface at GP-2.

The soil vapor implant was placed down through the rods, and then as the rods are withdrawn, the annular space around the implant will be filled with glass beads to a height of six inches above the implant. Two feet of sand was placed above the glass beads. Hydrated bentonite pellets was used to seal the remaining annular space. The polyethylene tubing extended at least six inches above the ground surface. To minimize the risk of ambient air being drawn down the borehole and into the implant during sampling, plastic sheeting was placed on the ground surface extending at least one foot around the tubing. Hydrated bentonite was placed below the plastic sheeting and over the sheeting around the tubing.

To verify that the soil vapor samples were not diluted with ambient air, helium was used as a tracer at locations GP-1 and GP-2. A plastic container was placed over the tubing and sealed at the edges with bentonite. Helium was released into the space between the plastic sheet and container. The implant was purged of between 0.5 and 1.5 liters of soil gas using a vacuum pump. A tubing pinch valve was used to seal the end of the tube after the tubing was purged and then a sample from the implant was collected and analyzed on-site for helium using a helium detector. Since no helium was detected at locations GP-1 and GP-2, helium was not used as a tracer at locations GP-3 and GP-4.

After verifying that helium was not detected at GP-1 and GP-2, and immediately after purging at locations GP-3 and GP-4, a 1-liter suma canister was immediately connected to the tubing and a soil vapor sample collected directly into the canister for laboratory analysis laboratory. Purging and sample flow collection rates did not exceed 0.2 liters/minute.

The soil vapor samples were collected directly into certified 1-liter canisters supplied by the analytical laboratory over a minimum of a one-hour period. A regulator was used to control flow into the canisters. At the end of one hour, gauge pressure and time were recorded, and if the vacuum was at 0" mercury, the regulator was disconnected from the canister. At locations GP-1 and GP-2 more than two hours were needed to collect the sample due to subsurface conditions (fine grained soils). After collecting the sample, the tubing was removed from the hole and the hole sealed with bentonite grout.

Chain-of-custody procedures were maintained between collection of the sample tubes and shipment to the laboratory.

Sub-Slab Samples

Before selecting a sampling location, the condition of the basement floor slab was observed for apparent cracks, floor drains or sump holes. A location near the center of the building and away from any cracks, floor penetrations, or foundation walls was selected. The location was recorded on Floor Plan contained in Appendix D.

To obtain the sample, a 3/8"-diameter hole was drilled through the concrete floor using a 3/8" drill bit. The hole was extended about 3" into the sub-slab material using the drill bit or a steel probe rod. A section of 3/8" O.D., 1/4" I.D. polyethylene tubing was inserted through the floor slab into sub-slab material and the annular space between the 3/8" tubing and 3/8" hole in the floor slab was sealed with a soywax seal. A new pair of disposable gloves was used to handle and install each collector tube.

Before sampling, 0.25 liters of soil-gas was purged from the sampling point using an air-sampling pump. After purging, the end of the sample tube was immediately connected to the regulator intake and the sample collected directly into certified 1-liter canisters supplied by the analytical laboratory. The regulator maintained a flow rate of less than 0.2 liters/minute during the 24-hour sampling period. The vacuum gauge on the regulator was checked periodically for loss in vacuum (vacuum starts at about 30" Hg and ends at about 1-5" Hg). At the end of 24 hours, gauge pressure and time were recorded, and the regulator was disconnected from the canister. After collecting the sample, the tubing was removed from the hole and the hole sealed with concrete grout.

Chain-of-custody procedures were maintained between collection of the sample tubes and shipment to the laboratory.

Indoor Air and Ambient Samples

For the indoor air samples, a location near the center of the building and away from walls was selected. The canisters were placed at a height of between three and 5 feet above the floor. The ambient sample was placed on a bench on the south side of building H-2 at a height of about two feet above the ground. Sampling locations were recorded on Floor Plans contained in Appendix D.

The samples were collected over a 24-hour period directly into certified 1-liter canisters supplied by the analytical laboratory. The regulator maintained a flow rate of less than 0.2 liters/minute during the sampling period. The vacuum gauge on the regulator was checked periodically for loss in vacuum (vacuum starts at about 30" Hg and ends at about 1-5" Hg). At the end of 24 hours, gauge pressure and time were recorded, and the regulator was disconnected from the canister.

Chain-of-custody procedures were maintained between collection of the sample tubes and shipment to the laboratory.

APPENDIX D
PRODUCT INVENTORY FORMS

Make & Model of field instrument used: MTE 1000 P/O

* 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.

14

List specific products found in the residence that have the potential to affect indoor air quality.

[illegible]

* 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.**

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ppb rae plus

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
Garage	Motor Oil	12.5	Unopened	Motor Oil	116	N
1	Antacid	2.5		Antacid	3070	N
1	Deodorant	3.5		Deodorant	1163	N
	Cheese	1.5		Cheese	3127	
11	Xylene	1	U	Xylene	1040	

* 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.

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

6

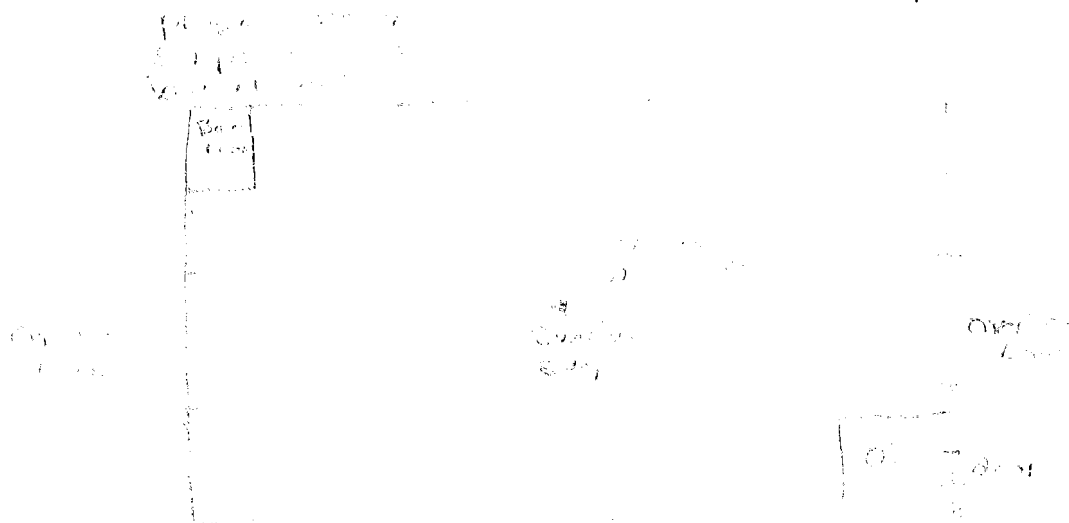
11. FLOOR PLANS

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:

Building 13-4



Boulevard

**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 Marlene Jones Date/Time Prepared Feb 10, 2006

Preparer's Affiliation George Mason U Phone No. 604-747-0000

Purpose of Investigation Environmental Assessment

1. OCCUPANT:

Interviewed: ☒ Y / ☐ N

Last Name: Engelhardt First Name: Yvonne

Address: 1000 14th St NW

County: Waga

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location NA Age of Occupants W

2. OWNER OR LANDLORD: (Check if same as occupant ☒)

Interviewed: ☐ Y / ☐ N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential
Industrial

School
Church

Commercial/Multi-use
Other: _____

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

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Medical Office

Does it include residences (i.e., multi-use)? Y / N

If yes, how many? 1 - 1000

Other characteristics:

Number of floors 1

Building age 25

Is the building insulated? Y / N

How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

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

- a. Above grade construction: wood frame concrete stone brick Stone
- b. Basement type: full crawlspace slab other None
- c. Basement floor: concrete dirt stone other _____
- d. Basement floor: uncovered covered covered with _____
- e. Concrete floor: unsealed sealed sealed with _____
- f. Foundation walls: poured block stone other _____
- g. Foundation walls: unsealed sealed sealed with _____
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: _____ (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Basement walls, floor, and ceiling are made of concrete. There are no cracks or gaps. A floor drain is located in the basement. A floor drain is located in the basement.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard

Heat pump
Stream radiation
Wood stove

Hot water baseboard
Radiant floor
Outdoor wood boiler Other _____

The primary type of fuel used is:

Natural Gas
Electric
Wood

Fuel Oil
Propane
Coal

Kerosene
Solar

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors Main Floor Other _____

Air conditioning:

Central Air

Window units

Open Windows

None

4

Are there air distribution ducts present?

Y/N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

7. OCCUPANCY

Is basement/lowest level occupied?

Full-time

Occasionally

Seldom

Almost Never

Level

General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

None

1st Floor

Office

2nd Floor

Office

3rd Floor

Office

4th Floor

Office

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?

Y/N

b. Does the garage have a separate heating unit?

Y/N/NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)

Y/N/NA

Please specify _____

d. Has the building ever had a fire?

Y/N When? _____

e. Is a kerosene 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 cleaning products been used recently?

Y/N When & Type? _____

i. Have cosmetic products been used recently?

Y / N When & Type? _____

5

j. Has painting/staining been done in the last 6 months?

Y / N Where & When? _____

k. Is there new carpet, drapes or other textiles?

Y / N Where & When? _____

l. Have air fresheners been used recently?

Y / N When & Type? _____

m. Is there a kitchen exhaust fan?

Y / N If yes, where vented? _____

n. Is there a bathroom exhaust fan?

Y / N If yes, where vented? _____

o. Is there a clothes dryer?

Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application?

Y / N When & Type? _____

Are there odors in the building?

Y / N

If yes, please describe: _____

Do any of the building occupants use solvents at work?

Y / N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work?

Y (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)

Yes, use dry-cleaning infrequently (monthly or less)

Yes, work at a dry-cleaning service

No

Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____

Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents?		Y / N
1	2	3

6

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.

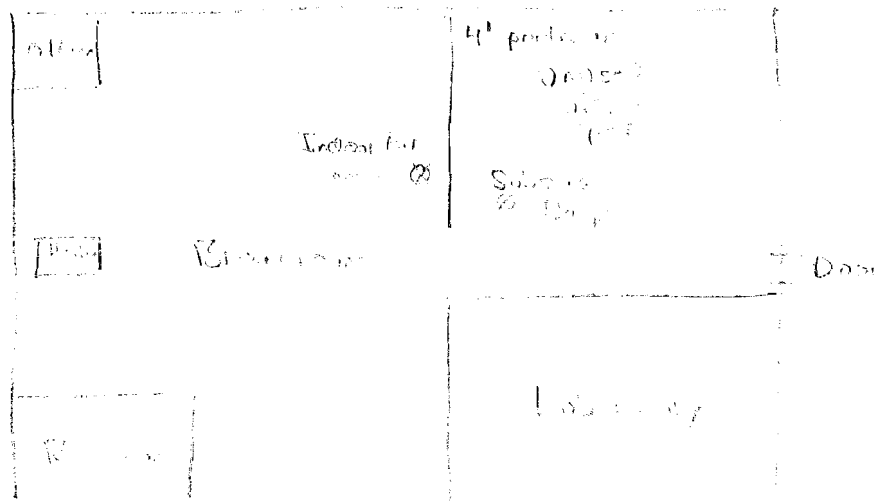
Basement:

First Floor:

Building B-4

↑

Conclusion



Make & Model of field instrument used: 1000

List specific products found in the residence that have the potential to affect indoor air quality.

[illegible]

**** 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.**

c. Responsibility for costs associated with reimbursement explained? Y / N

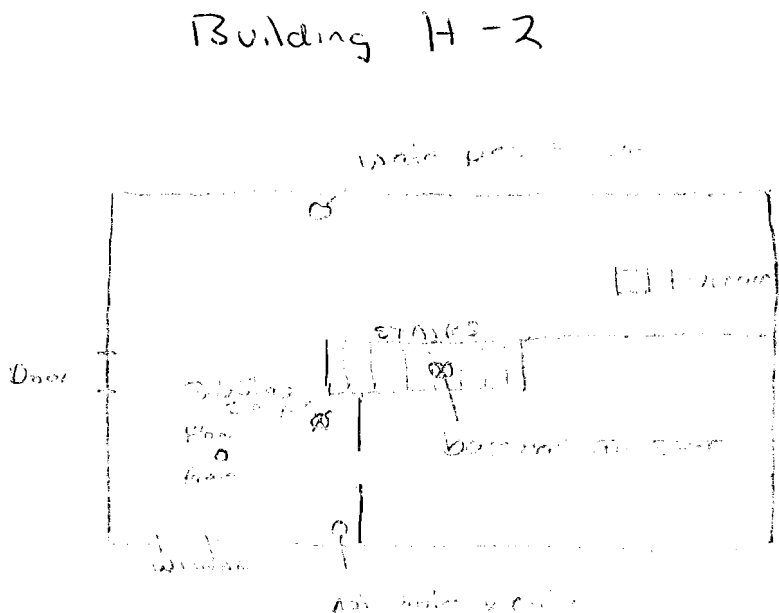
d. Relocation package provided and explained to residents? Y / N

6

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:



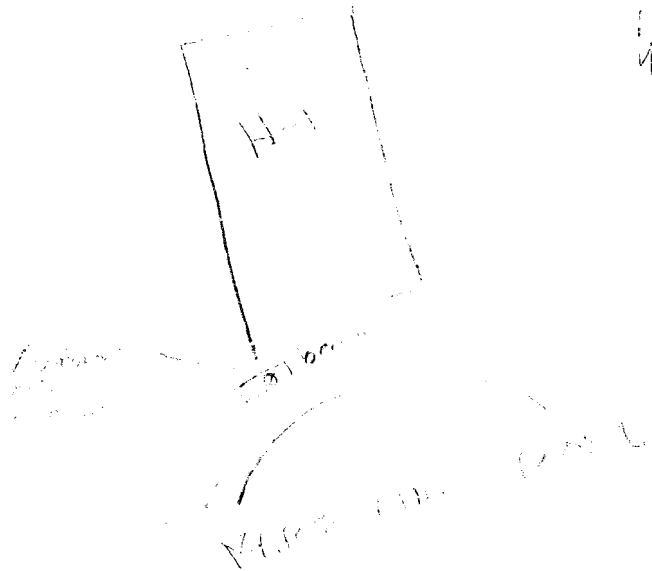
First Floor:

No first floor sketch provided. The building has a basement and a 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.



CONDURSAL THINNER

() XYLENE

Material Safety Data Sheet

00-061

Provided by EMCO CHEMICAL DISTRIBUTORS, INC.
DOI 1030 NORTH CHICAGO, ILL.

Page 1

Revision Date: 8/9/88

This MSDS is being provided to your company for the purpose of providing current health and safety information to your management and for your employees who work with this material. Please read the information on these sheets and then provide this information to those people at your company whose responsibility it is to comply with FEDERAL and STATE RIGHT TO KNOW regulations. Also make this information available to any employee who requests it.

It is your obligation to comply with this Act.

DUFFY COMPANY
804 S. PETON COURT
MUELLING, IL 60090

Custs 1963
Invoices 18306
Date 02/02/90

If EMCO CHEMICAL DISTRIBUTORS considers the formula of this product to be a trade secret, the exact chemical names of the ingredient(s) and the percentages in which they are combined will not appear in the body of this sheet. The exact composition is available upon request to physicians, industrial hygienists and other health professionals.

Section I - PRODUCT IDENTIFICATION

Producer's Name: EXXON COMPANY U.S.A.
Address: P.O. BOX 2180
HOUSTON TEXAS 77252-2180
Regular Phone Number: (713) 656-5949
Emergency Telephone Number: 713-656-3424
Chemical Name and Synonyms: XYLENE
Chemical Family: BLEND AROMATIC HYDROCARBON
Trade Name and Synonyms: XYLENE
Formula: SEE SECTION II
CAS# 1330-20-7
Hazard Classification: XYLENE - FLAMMABLE LIQUID
UN 1307

Section II - HAZARDOUS COMPONENTS

Ingredient	Percent	PEL*	TLV**
XYLENE	83%	100PPH	100PPH
ETHYLBENZENE	17%	100PPH	100PPH

* 1987 OSHA
** 1988/89 ACGIH

100 PPM F(435 MG/100) FOR AN 8-HOUR WORKDAY
BASIS: OSHA REGULATION 29 CFR 1910.1000

TYPICAL COMPOSITION: XYLENE CAS# 1330-20-7 APPROX. 83% MASS
ETHYLBENZENE CAS# 100-41-4 APPROX. 17% MASS

Section III - PHYSICAL DATA - TYPICAL

Initial Boiling Point (F): APPROX. 139-142.4 C (280.4-284.0 F)
Vapor Pressure: APPROX. 23 mm Hg @ 25 C ASTH D 2879
Vapor Density: (AIR=1): 3.7
Solubility in Water: @ 1 ATM AND 25 C (77 F)
NEGLECTIBLE LESS THAN 0.1%
Specific Gravity: (15.6/ 15.6 C) 0.870
Percent Volatiles: 100% @ 1 ATM AND 25C (77F)
Evaporation Rate: @ 1 ATM AND 25 C (77 F)
(N-DUTYL ACETATE=1) 0.7
Appearance and Odor: CLEAR WATER-WHITE LIQUID WITH AROMATIC HYDROCARBON ODOR.

Section IV - FIRE AND EXPLOSION DATA

Flesh Point (TCC): 26 C (78.8 F) ASTH D 56 (TCC)
FLAMMABLE PER. DIST. AS PER 173.115
AUTOIGNITION TEMP.: 349 C (650 F) ASTH D 2155

Flammable Limits: LEL: 1.0%
UEL: 7.0%

Extinguishing Media: FOAM, WATER SPRAY (FOO), DRY CHEMICAL, CARBON DIOXIDE AND VAPORIZING LIQUID TYPE EXTINGUISHING AGENTS MAY ALL BE SUITABLE FOR EXTINGUISHING FIRES INVOLVING THIS TYPE OF PRODUCT. DEPENDING ON SIZE OR POTENTIAL SIZE OF FIRE AND CIRCUMSTANCES RELATED TO THE SITUATION. PLAN FIRE PROTECTION AND RESPONSE STRATEGY THROUGH CONSULTATION WITH LOCAL FIRE PROTECTION AUTHORITIES OR APPROPRIATE SPECIALISTS.

Special Firefighting Procedures: THE FOLLOWING PROCEDURES FOR THIS TYPE OF PRODUCT ARE BASED ON THE RECOMMENDATIONS IN THE NATIONAL FIRE PROTECTION ASSOCIATION'S FIRE PROTECTION GUIDE ON HAZARDOUS MATERIALS, FIFTH EDITION (1984). USE DRY CHEMICAL, FOAM OR CARBON DIOXIDE. WATER MAY BE INADEQUATE. IF A LEAK OR SPILL OCCURS, USE WATER SPRAY TO DISPERSE THE VAPORS AND TO PROTECT PERSONS FROM EXPOSURE. MINIMIZE BREATHING GASES. FLUSH SKIN AWAY FROM EXPOSURE. REMOVE CLOTHING. IF NECESSARY, REMOVE CLOTHING OR DECONTAMINATION PRODUCTS. USE SUPPLIED-AIR BREATHING EQUIPMENT FOR ENCLINER OR CONFINED SPACES OR AS OTHERWISE NEEDED. THE INCLUSION OF THE PHRASE "WATER INEFFECTIVE" IS TO INDICATE THAT ALTHOUGH WATER CAN BE USED TO COOL AND PROTECT EXPOSED MATERIAL, WATER MAY NOT EXTINGUISH THE FIRE UNLESS USED UNDER FAVORABLE CONDITIONS BY EXPERIENCED FIRE FIGHTERS TRAINED IN FIGHTING ALL TYPES OF FLAMMABLE LIQUID FIRES.

FLAMMABLE LIQUID

Section V - HEALTH HAZARD DATA

Permissible Exposure Level: SEE SECTION 11.

Effects of Over Exposure: HEALTH STUDIES HAVE SHOWN THAT MANY PETROLEUM HYDROCARBONS AND SYNTHETIC LUBRICANTS POSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. AS A PRECAUTION, EXPOSURE TO LIQUIDS, VAPORS, MISTS OR FUMES SHOULD BE MINIMIZED.
HIGH VAPOR CONCENTRATIONS (GREATER THAN APPROXIMATELY 1000 PPM) ARE IRRITATING TO THE EYES AND THE RESPIRATORY TRACT. MAY CAUSE HEADACHES AND DIZZINESS, ARE ANESTHETIC, AND MAY HAVE OTHER CENTRAL NERVOUS SYSTEM EFFECTS.
NATURE OF HAZARD: PROLONGED OR REPEATED SKIN CONTACT WITH THIS PRODUCT TENDS TO REMOVE SKIN OILS POSSIBLY LEADING TO IRRITATION AND DERMATITIS.
PRODUCT CONTACTING THE EYES MAY CAUSE EYE IRRITATION.
TOXICITY INFORMATION: PRODUCT HAS A LOW ORDER OF ACUTE ORAL TOXICITY, BUT MINUTE AMOUNTS ASPIRATED INTO THE LUNGS DURING INGESTION MAY CAUSE SEVERE PULMONARY INJURY OR DEATH.

Emergency and First Aid Procedures: EYE CONTACT: IF SPLASHED INTO THE EYES, FLUSH WITH CLEAR WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES. IF IRRITATION PERSISTS, CALL A PHYSICIAN.
SKIN CONTACT: IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN THOROUGHLY WITH SOAP AND WATER.
INHALATION: IF OVERCOME BY VAPOR, REMOVE FROM EXPOSURE AND CALL A PHYSICIAN IMMEDIATELY. IF BREATHING IS IRREGULAR OR HAS STOPPED, START RESUSCITATION. ADMINISTER OXYGEN, IF AVAILABLE.
INGESTION: IF INGESTED DO NOT INDUCE VOMITING. CALL A PHYSICIAN IMMEDIATELY.

Section VI - REACTIVITY DATA

Stability: STABLE
Incompatibility: STRONG OXIDIZERS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE.
Hazardous Decomposition Products: FUMES, SMOKE, CARBON MONOXIDE, ALDEHYDE AND OTHER DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.
Hazardous Polymerization: WILL NOT OCCUR.

Continued

Section VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SHUT OFF AND ELIMINATE ALL IGNITION SOURCES. KEEP PEOPLE AWAY. RECOVER FREE PRODUCT. ADD SAND, EARTH OR OTHER SUITABLE ABSORBENT TO SPILL AREA. MINIMIZE BREATHING VAPORS. MINIMIZE SKIN CONTACT. VENTILATE CONFINED SPACES. OPEN ALL WINDOWS AND DOORS. KEEP PRODUCT OUT OF SEWERS AND WATERCOURSES BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES, OR EXTENSIVE LAND AREAS. ASSURE CONFORMITY WITH APPLICABLE GOVERNMENTAL REGULATIONS. CONTINUE TO OBSERVE PRECAUTIONS FOR VOLATILE, FLAMMABLE VAPORS FROM ABSORBED MATERIAL.

WASTE DISPOSAL METHOD: CONTACT STATE, LOCAL AND FEDERAL AGENCIES TO ENSURE COMPLIANCE OF DISPOSAL METHOD WITH CURRENT REGULATIONS.

Section VIII - PROTECTIVE EQUIPMENT TO BE USED

Respiratory Protection: USE SUPPLIED-AIR RESPIRATORY PROTECTION IN CONFINED OR ENCLOSED SPACES, IF NEEDED.

Ventilation: PROVIDE GREATER THAN 60 FEET PERMINUTE HOOD FACE VELOCITY. USE ONLY WITH VENTILATION SUFFICIENT TO PREVENT EXCEEDING RECOMMENDED EXPOSURE LIMIT OR BUILDUP OF EXPLOSIVE CONCENTRATIONS OF VAPOR IN AIR. USE EXPLOSION-PROOF EQUIPMENT. NO SMOKING OR OPEN LIGHTS.

Protective Gloves: USE CHEMICAL RESISTANT GLOVES, IF NEEDED, TO AVOID PROLONGED OR REPEATED SKIN CONTACT.

Eye Protection: SPLASH PROOF CHEMICAL GOGGLES OR FACE SHIELD WHEN EYE CONTACT MAY OCCUR.

Other Protective Equipment: USE CHEMICAL-RESISTANT APRON OR OTHER IMPERVIOUS CLOTHING, IF NEEDED, TO AVOID CONTAMINATING REGULAR CLOTHING WHICH COULD RESULT IN PROLONGED OR REPEATED SKIN CONTACT.

*Adequate means equivalent to outdoors ventilation.

Section IX - SPECIAL PRECAUTIONS OR OTHER COMMENTS

Precautions to be taken in handling and storing: KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT HANDLE OR STORE NEAR HEAT, SPARKS, FLAME, OR STRONG OXIDANTS. TO PREVENT FIRE OR EXPLOSION RISK FROM STATIC ACCUMULATION AND DISCHARGE, EFFECTIVELY GROUND PRODUCT TRANSFER SYSTEM IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD FOR PETROLEUM PRODUCTS.

Other Precautions: MINIMIZE BREATHING VAPOR OR MIST. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. REMOVE CONTAMINATED CLOTHING. LAUNDER OR DRY-CLEAN BEFORE REUSE. REMOVE CONTAMINATED SHOES AND THOROUGHLY CLEAN AND DRY BEFORE REUSE. CLEANSE SKIN THOROUGHLY AFTER CONTACT. BEFORE BREAKS AND HEALS. AND AT END OF WORK PERIOD. PRODUCT IS READILY REMOVED FROM SKIN BY WATERLESS HAND CLEANERS FOLLOWED BY WASHING THOROUGHLY WITH SOAP AND WATER.

FOR FURTHER INFORMATION RELATIVE TO SPILLS RESULTING FROM TRANSPORTATION INCIDENTS, REFER TO LATEST DEPARTMENT OF TRANSPORTATION EMERGENCY RESPONSE GUIDEBOOK FOR HAZARDOUS MATERIALS INCIDENTS, DOT PS800.3.

EMPTY CONTAINER WARNING: "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. ** DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. ** DO NOT ATTEMPT TO CLEAN SINCE RESIDUE IS DIFFICULT TO REMOVE. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. FOR WORK ON TANKS REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTINGENT OPERATIONS.

HMIS RATING: H=1 F=3 R=0

THE FOLLOWING CHEMICALS MAY BE SUBJECT TO REPORTING UNDER SEC. 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

XYLENE (MIXED ISOMERS)	CAS# 1320-20-7	83 MTX
ETHYL BENZENE	CAS# 100-41-4	17 MTX

Date Entered: 01/20/86

Revision Date: 8/9/88