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August 14, 2007

Mr. Josh Cook
MGP Remedial Section
Bureau of Western Remedial Action
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7010

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AUG 20 2007

Remedial Bureau C
Division of Environmental Remediation

**Subject: Soil Vapor Intrusion Evaluation Report
28 Pike Street Section
Pike Street Former MGP Site
Port Jervis, New York
NYSDEC Site No. 03-36-049V**

Dear Mr. Cook,

On behalf of our client, Orange and Rockland Utilities, Inc. (O&R), ENSR Corporation (dba The RETEC Group, Inc. [RETEC]) has prepared this soil vapor intrusion (SVI) evaluation report for the 28 Pike Street section of the former Pike Street manufactured gas plant (MGP) site located in Port Jervis, New York. This report has been modified to reflect the comments provided in your letter dated July 3, 2007.

Background

The attached Figure 1 shows the layout of the 28 Pike Street property and the surrounding area. Two previous SVI sampling events have been completed at the property. The first event was completed in June 2004, with the results submitted to the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) in the Phase II RI Report for the Port Jervis MGP site, dated October 25, 2005. A second sampling event was completed in June 2006 with the results provided to the agencies in the Supplemental Investigation (SI) Report for the 28 Pike Street section of the site, dated January 24, 2007. The NYSDOH requested that a third round of sampling be performed to obtain SVI samples during the heating season (between November 15 and March 31) to further evaluate the potential vapor intrusion pathway. The third SVI sampling event was completed on March 20, 2007. The results of the field activities and laboratory analyses are presented below.

Scope of work

The SVI evaluation sampling was performed in accordance with the methods and procedures provided in the NYSDOH document entitled "*Final – Guidance for Evaluating Soil Vapor Intrusion in the State of New York*," dated October 2006 [NYSDOH Guidance]. The scope of work for the evaluation included the completion of a NYSDOH Indoor Air Quality Questionnaire and Building Inventory, a Chemical Products Inventory, and the collection and analysis of SVI samples.

Property building and chemical inventory

A reconnaissance was performed at the property building on March 19, 2007. The observations made during the reconnaissance are presented on the completed NYSDOH Indoor Air Quality Questionnaire which is included in Appendix A. The observations made during the chemical products inventory are summarized in Table 1, which is a completed NYSDOH Household Products Inventory Form.

SVI sample locations

The locations of the March 2007 SVI samples are shown in red on Figure 1. The locations of the samples previously collected at the property are also included on the figure in blue (June 2004) and green (June 2006). The sample locations for the March 2007 event are summarized as follows:

- Sub-slab soil vapor sample GRSG5(07) was collected in the boiler room of the basement which has a concrete floor.
- Soil vapor sample GRSG6(07) was collected from the main area of the basement which has an earthen floor.
- Indoor air sample GRIA6(07) was collected from the main area of the basement, near soil vapor sample GRSG6(07).
- Indoor air sample GRIA5(07) and duplicate indoor air sample GRIA50(07) were collected from the restaurant area on the first floor of the building.
- Ambient air sample GRAMBUP(07) was collected to the southwest of the property building at an upwind location.

Soil vapor sampling

Two types of soil vapor samples were collected. Sub-slab vapor sample GRSG5(07) was collected from immediately below the concrete floor of the basement boiler room. A sub-slab soil vapor sampling point was installed at this location by drilling a $\frac{3}{4}$ -inch diameter hole through the concrete floor slab with a rotary hammer. Teflon™ tubing was placed in the hole, and the hole was sealed with modeling clay.

Soil vapor sample GRSG6(07) was collected from the main area of the basement (Figure 1). A Geoprobe™ PRT (Post-Run Tubing) Systems sampler was used to collect the soil vapor sample. A hand-held electric jackhammer was used to advance the sampler probe assembly which consisted of 1 $\frac{1}{4}$ -inch outside diameter (O.D.) steel drill rod, a PRT expendable point holder, a PRT adaptor, and an expendable (single use) drive point, to 5 feet below the ground surface (bgs). A "knock-out rod" was advanced through the soil vapor probe and the expendable point holder to ensure the point was removed and the rod end was open to allow soil vapor to enter the assembly. The soil vapor probe was then retracted 1 foot with a hand-held jack to expose the sampling interval (4 to 5 feet bgs). Teflon™ tubing was then attached to the PRT adaptor fitting and inserted down the probe rod and threaded into the PRT point holder. The annulus around the rod was then filled with a hydrated bentonite slurry, 4 inches in diameter, from 0 to 1 foot bgs.

A helium tracer gas evaluation was then performed for both soil vapor samples to ensure the integrity of the soil vapor sampling seals, and to assess the potential for the introduction of indoor air into the soil vapor samples. A metal shroud was used as an air-tight chamber to retain the helium. The chamber was placed over the sampling points and sealed to the concrete floor with modeling clay, or to the earthen floor with hydrated bentonite. The sampling tubing was run through a hole at the top of the chamber and sealed. Helium was then introduced through an opening at the top of the chamber. The

helium concentration was measured with a helium detector through an opening at the bottom of the chamber to ensure that the chamber was filled with helium to a concentration greater than 90%. Once this measurement was confirmed, the chamber was sealed. Approximately 3 volumes of air were purged from the sampling tubing with the helium meter at a rate of approximately 0.2 liters per minute. Helium was not detected in the purged air from any of the samples, indicating that the seals were competent. The soil vapor samples were also analyzed for helium to confirm the field screening results. The laboratory results are discussed below. The soil vapor points were then left to stabilize overnight so that the soil vapor samples could be collected at the same time as the indoor and ambient air samples.

SVI sample collection

The soil vapor, indoor air, and ambient air samples were collected in 6-liter Summa sampling canisters provided by Air Toxics Laboratory of Folsom, California. Each canister was equipped with a flow restrictor which was pre-set to collect the samples over a time period of approximately 2 hours. Laboratory grade, ¼-inch Teflon™ tubing was used to connect the sampling equipment to the flow restrictors. Following sample collection, the canisters were shipped to the laboratory. The chain of custody record for the sample shipment is included in with the laboratory results in Appendix B.

SVI evaluation results

The air and soil vapor samples were analyzed by Air Toxics, which is a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory, for volatile organic compounds (VOCs) by U.S. EPA Method TO-15 (including naphthalene). The sub-slab vapor samples were also analyzed for helium by ASTM Method ASTM D-1945. Consistent with the sampling performed in 2004 and 2006, in addition to the standard TO-15 list of compounds, several additional compounds were analyzed for, including: indane, indene, thiophene, styrene, 2-methyl pentane, isopentane, 2,3-dimethyl pentane, isooctane, and methyl tert-butyl ether (MTBE). The results of the SVI analyses are summarized in Table 2. The laboratory Form I Results Sheets are included in Appendix B. The full NYSDEC Category B Analytical Services Protocol (ASP) laboratory package is included in Appendix C (CD-ROM). The results of the sampling events performed in June 2004, June, 2006 and this event are summarized in Table 3.

DUSR review

A Data Usability Summary Report (DUSR) was prepared in order to perform a review the comprehensive data package provided by the laboratory. Air data quality for the VOC analyses was evaluated by reviewing the following parameters: holding times, GC/MS tuning and performance, internal standards, initial and continuing calibrations, continuing calibration verifications, surrogate recoveries, LCS, laboratory blanks, laboratory duplicates, compound identification, and compound quantitation. No problems were identified for the analyses and the data was determined to be useable with some qualifications for laboratory blank contamination and calibration nonconformance. The Form I Results Sheets in Appendix B, and the data summary spreadsheets (Tables 2 and 3) have been modified to reflect the findings of the DUSR. The DUSR is included in Appendix D.

Analytical results

On Tables 2 and 3, the sample results are compared to a database of typical background indoor air concentrations from fuel oil heated homes in New York State that was compiled by the NYSDOH in 2003, and revised in 2005. Using this dataset, background values have been established, which are expressed as statistical values in the tables. The "75th percentile" value indicates that 75% of the background indoor air concentrations were below that value. Similarly, the "90th percentile" value

indicates that 90% of the background indoor air concentrations were below that value. Where a concentration is greater than the 75th percentile concentration listed on the tables, the concentration is highlighted with yellow shading. Where a concentration is greater than the 90th percentile concentration listed on the tables, the concentration is highlighted with green shading.

The 68 VOCs that were analyzed are divided into two categories in the data summary table. The first category includes compounds that could possibly be related to MGP sources, but may also be related to non-MGP sources, including: benzene, naphthalene, and indene. The second category includes compounds that are certainly not related to MGP sources, including: ethanol, chlorinated hydrocarbons, and methyl tert-butyl ether (MTBE), a gasoline additive.

The NYSDOH has developed decision matrices for four specific VOC compounds to assist in determining whether further actions are required regarding these compounds. The compounds include TCE and carbon tetrachloride, which are addressed in Soil Vapor/Indoor Air Matrix 1, and 1,1,1 TCA and PCE which are addressed in Soil Vapor/Indoor Air Matrix 2. Decision matrices have not yet been established for any other compounds. The concentrations of VOCs in ambient air, soil vapor and indoor air, and the actions indicated in the respective NYSDOH soil vapor matrix tables, where applicable, are discussed below. The NYSDOH matrix tables are included in Appendix E.

Ambient air results

The ambient air sample contained VOCs which were detected in concentrations within the typical range for indoor air.

Tracer gas analyses

The results of the helium tracer gas analyses for the sub-slab (GRSG5(07)) and soil vapor (GRSG6(07)) samples indicate that helium was not detected in concentrations greater than the method detection limits for either of the samples. The results of the analysis indicate that the seals installed during the sub-slab and soil vapor sampling were effective in preventing the infiltration of ambient air into the vapor samples.

Non-MGP-related VOCs

Consistent with the sampling performed in 2004 and 2006, the two soil vapor samples contained non-MGP-related VOCs in concentrations higher than the typical range found in indoor air (i.e. greater than the 90th percentile of NYSDOH indoor air background values). The indoor air samples also contained non-MGP-related VOCs. Examination of the relative concentrations of these VOCs in the soil vapor and indoor air samples indicates whether or not soil vapor intrusion was occurring at the time of sampling.

Tetrachloroethene (also known as perchloroethene, or PCE, a common dry cleaning agent) was detected in the soil vapor samples from the boiler room and main basement areas in concentrations of 89 and 20 $\mu\text{g}/\text{m}^3$, respectively. For comparison, the NYSDOH background value (90th percentile) for PCE is 2.9 $\mu\text{g}/\text{m}^3$. PCE was not detected in concentrations greater than the method reporting limits in the indoor air samples of 1 $\mu\text{g}/\text{m}^3$. These results indicate that intrusion of the soil vapor into the indoor air was not apparent. As shown on Table 3, the concentrations of PCE in soil vapor are similar to the results of the sampling performed in 2004 and 2006. Possible actions for PCE are addressed in the NYSDOH Vapor/Indoor Matrix 2 Table (Appendix E). The levels of PCE detected in soil vapor and indoor air in previous rounds of sampling (June, 2006) require reasonable and practical actions to be taken to identify source(s) and reduce exposures. As the former MGP site is not considered a potential

source of PCE, we understand that further assessment will be conducted separately from activities associated with the MGP site.

Trichlorofluoromethane (also known as Freon 11 – a refrigerant gas) was found at a concentration of 39 $\mu\text{g}/\text{m}^3$ in the sample from beneath the boiler room, and a concentration of 25 $\mu\text{g}/\text{m}^3$ in the sample from beneath the main basement area. Freon 11 was not detected in the indoor air samples in concentrations greater than the 75th percentile background value for this compound. The highest indoor concentration was 2.5 $\mu\text{g}/\text{m}^3$, which was similar to the ambient air sample concentration of 1.6 $\mu\text{g}/\text{m}^3$. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Dichlorofluoromethane (also known as Freon 12 – a refrigerant gas) was found at a concentration of 9.8 $\mu\text{g}/\text{m}^3$ in the sample from beneath the boiler room, and a concentration of 4.3 $\mu\text{g}/\text{m}^3$ in the sample from beneath the main basement area. Freon 12 was not detected in the indoor air samples in concentrations greater than the 75th percentile background value for this compound. The highest indoor concentration was 2.8 $\mu\text{g}/\text{m}^3$, which was similar to the ambient air sample concentration of 2.6 $\mu\text{g}/\text{m}^3$. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Chloroform was not detected in the sample from beneath the boiler room's concrete slab, yet was detected in a concentration of 1.2 $\mu\text{g}/\text{m}^3$ in the sample from beneath the main basement area (not covered by a slab), which is greater than the 75th percentile background value for this compound of 0.54 $\mu\text{g}/\text{m}^3$. Chloroform was detected in the basement indoor air sample at a concentration of 1.5 $\mu\text{g}/\text{m}^3$, which is greater than the 90th percentile background value for this compound of 1.4 $\mu\text{g}/\text{m}^3$. It was not detected in the ambient air sample. Because the concentration of this compound was equivalent or slightly higher in the indoor air than the uncovered soil vapor sample, yet was not detected in the sub-slab soil vapor, the source of the chloroform may be from the building and migrating into the uncovered soil vapor but not the covered sub-slab soil vapor. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Acetone was detected in the sample from beneath the boiler room's concrete slab at a concentration of 37 $\mu\text{g}/\text{m}^3$, and was detected at a concentration of 17 $\mu\text{g}/\text{m}^3$ in the sample from beneath the main basement area (not covered by a slab). It was detected in the indoor air samples at concentrations of 11, 15, and 16 $\mu\text{g}/\text{m}^3$. It was detected in the ambient air sample at a concentration of 16 $\mu\text{g}/\text{m}^3$. Because the concentration of this compound in the indoor air was equivalent or lower than the ambient air concentration, for this compound intrusion of the soil vapor into the indoor air was not apparent.

Ethanol was detected in the sample from beneath the boiler room's concrete slab at a concentration of 20 $\mu\text{g}/\text{m}^3$, yet was detected in a concentration of 330 $\mu\text{g}/\text{m}^3$ in the sample from beneath the main basement area (not covered by a slab). Ethanol was detected in the basement indoor air sample at a concentration of 530 $\mu\text{g}/\text{m}^3$, and in the first floor indoor air samples at concentrations of 520 and 490 $\mu\text{g}/\text{m}^3$. It was detected in the ambient air sample at a concentration of 12 $\mu\text{g}/\text{m}^3$. Because the concentration of this compound was higher in the indoor air than the uncovered soil vapor sample, yet was present in a much lower concentration in the sub-slab soil vapor, the source of the ethanol may be from the building and migrating into the uncovered soil vapor but not the covered sub-slab soil vapor. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Possibly MGP-related VOCs

For the sub-slab soil vapor sample collected in the boiler room, none of the VOCs that the NYSDEC and NYSDOH consider to be potentially attributable to MGP operations were detected at concentrations above the method detection limits, with the exception of toluene, which was detected at a concentration of $0.69 \mu\text{g}/\text{m}^3$, which is within the typical range that this compound is found in indoor air (i.e. lower than the 90th percentile of NYSDOH background value of $58 \mu\text{g}/\text{m}^3$). The concentrations of VOCs beneath the slab were lower than the sampling performed in 2004 and 2006, and were lower than the concentrations in the soil vapor and indoor air samples collected in 2007.

For the soil vapor sample collected from the main area of the basement, which is not covered by a concrete slab, several compounds that could possibly be MGP related were detected in concentrations greater than the 90th percentile of the NYSDOH indoor air background values.

The compounds indan, indene, and thiophene, which are considered especially indicative of MGP impacts, were not detected in either of the soil vapor samples or in any of the indoor air samples.

2-methylpentane was detected at a concentration of $10 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at higher concentrations, 16 and $17 \mu\text{g}/\text{m}^3$, in the indoor air sample. It was not detected in the ambient air sample. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Benzene was detected at a concentration of $4 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at higher concentrations, 5.3 and 6, and $5.9 \mu\text{g}/\text{m}^3$, in the indoor air samples. It was detected in the ambient air sample at $0.54 \mu\text{g}/\text{m}^3$. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Cyclohexane was detected at a concentration of $2.8 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at higher concentrations, 4, 4.4 and $4.9 \mu\text{g}/\text{m}^3$, in the indoor air sample. It was not detected in the ambient air sample. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Ethylbenzene was detected at a concentration of $23 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at a higher concentration of $29 \mu\text{g}/\text{m}^3$ in the basement indoor air sample, and at 4.2 and $3.6 \mu\text{g}/\text{m}^3$, in the first floor indoor air samples. It was not detected in the ambient air sample. The concentrations of ethylbenzene in the soil vapor and basement indoor air sample were above the typical range found in indoor air (i.e. above the 90th percentile NYSDOH indoor air background value of $7.4 \mu\text{g}/\text{m}^3$). These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Hexane was detected at a concentration of $9.3 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at higher concentrations of 13, 14, and $15 \mu\text{g}/\text{m}^3$ in the indoor air samples. It was not detected in the ambient air sample. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Isopentane was detected at a concentration of $87 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at a higher concentration of $99 \mu\text{g}/\text{m}^3$ in the basement indoor air sample, and at 78 and $81 \mu\text{g}/\text{m}^3$, in the first floor indoor air samples. It was not detected in the ambient air sample. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Toluene was detected at a concentration of $8.4 \mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at lower concentrations of 5.6, 5.8, and $6.3 \mu\text{g}/\text{m}^3$ in the indoor air samples. These concentrations were

below the typical range found in indoor air (i.e. above the 90th percentile NYSDOH indoor air background value of 58 $\mu\text{g}/\text{m}^3$). It was detected in the ambient air sample at a concentration of 1.3 $\mu\text{g}/\text{m}^3$. These concentrations were below the typical range found in indoor air (i.e. above the 90th percentile NYSDOH indoor air background value of 58 $\mu\text{g}/\text{m}^3$). These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

M/p-xylenes were detected at a concentration of 130 $\mu\text{g}/\text{m}^3$ in the soil vapor sample, and were detected at a higher concentration of 150 $\mu\text{g}/\text{m}^3$ in the basement indoor air sample, and at 20 and 19 $\mu\text{g}/\text{m}^3$ in the first floor indoor air samples. These concentrations were above the typical range found in indoor air (i.e. above the 90th percentile NYSDOH indoor air background value of 12 $\mu\text{g}/\text{m}^3$). They were not detected in the ambient air sample. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

O-xylene was detected at a concentration of 89 $\mu\text{g}/\text{m}^3$ in the soil vapor sample, and was detected at a concentration of 84 $\mu\text{g}/\text{m}^3$ in the basement indoor air sample, and at 10 and 9.3 $\mu\text{g}/\text{m}^3$ in the first floor indoor air samples. These concentrations were above the typical range found in indoor air (i.e. above the 90th percentile NYSDOH indoor air background value of 7.6 $\mu\text{g}/\text{m}^3$). It was not detected in the ambient air sample. These results indicate that for this compound intrusion of the soil vapor into the indoor air was not apparent.

Discussion of results and conclusions

Taken together, the results from this sampling event form a pattern for those VOCs that were present in indoor air above typical background values. The pattern indicates that an indoor source of the VOCs may have been migrating from the indoor air downward into the soil vapor in the area not covered by the concrete slab, and were less able to migrate into the soil vapor that is covered by the concrete slab. The mechanism for this possible downward migration is most likely caused by downward air movement through the soil. Environmental and building factors, such as temperature difference between indoor and outdoor air, can result in a pressure differential between the building and the soil that induces migration of vapor phase contaminants [NYSDOH Guidance pp 2-7]. However, this interpretation of the results is not conclusive because toluene was detected in soil vapor beneath the concrete slab, and several MGP-related VOCs were detected in the sub-slab soil vapor in sampling performed in 2004 and 2006. It is therefore possible that the soil vapor could be impacted, at least in part, as a result of subsurface contamination.

The table below provides a summary based on the 2007 sampling.

Compound	Detected in indoor air higher than background or ambient	Detected at higher concentration in indoor air than soil vapor	Detected in soil vapor (not covered by slab)	Detected in sub-slab vapor	Soil vapor intrusion apparent
PCE	No				No
Freon 11	No				No
Freon 12	No				No
Chloroform	Yes	Yes	Yes	No	No
Acetone	No				No
Ethanol	Yes	Yes	Yes	No	No
2-methylpentane	Yes	Yes	Yes	No	No
Benzene	No				No
Cyclohexane	No				No
Ethylbenzene	Yes	Yes	Yes	No	No
Hexane	Yes	Yes	Yes	No	No
Isopentane	Yes	Yes	Yes	No	No
Toluene	No			Yes	No
m/p-Xylenes	Yes	Yes	Yes	No	No
o-Xylene	Yes	Yes	Yes	No	No

The indoor source or sources of the compounds which were present in indoor air above typical background values (ethylbenzene, xylenes, and chloroform) were not apparent from the building inventory. However, observations made during the sampling event included an odor of cleaning products present in the building. Cleaning products used to remove grease or paint products could contain ethylbenzene and xylenes [National Institutes of Health website: <http://householdproducts.nlm.nih.gov>].

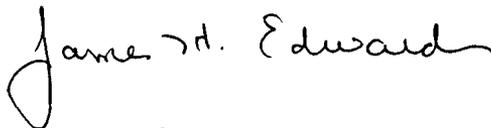
Recommendations

With regard to the results for ethylbenzene, xylenes, and chloroform the concentrations detected are likely due to indoor sources rather than vapor intrusion from the MGP impacts. Therefore steps should be taken to identify the indoor source(s) and reduce exposures accordingly (e.g. by keeping containers tightly capped or by storing VOC-containing products in places where people do not spend much time [NYSDOH Guidance, p.51]).

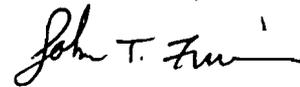
The non-MGP-related compound PCE was detected in the soil vapor samples collected in the property building in concentrations that were greater than the typical background range for indoor air. PCE was not detected in any of the indoor air samples collected at the property. We understand that, based on these and previous results, additional activities related to PCE will be conducted separately from activities associated with the MGP site.

If you have any questions regarding the information provided in this letter, please do not hesitate to contact us at (607) 277-5716.

Sincerely yours,



James H. Edwards
Senior Geologist



John T. Finn, P.E.
Senior Engineer

JHE:mlr

Attachments: Table 1 – NYSDOH Household Products Inventory Form
Table 2 – SVI Sample Results - March 2007
Table 3 – June 2004, June 2006 and March 2007 SVI Sample Results
Figure 1 – Site Plan with SVI Sampling Locations
Appendix A – NYSDOH Indoor Air Quality Questionnaire
Appendix B – Chain-of-custody Form and Form I Laboratory Results Sheets
Appendix C – NYSDEC ASP Category B Laboratory Report Package (CD-ROM)
Appendix D – DUSR
Appendix E – NYSDOH Soil Vapor/Indoor Air Matrix Tables

cc: Maribeth McCormick – O&R
Kristin Kulow – NYSDOH
Project File: 05090-012

Table 1
Chemical Products Inventory
28 Pike Street Section
Port Jervis MGP Site
March 2007

Product	Container Condition	VOC Content
First Floor Storage Room		
Old English Oil	Good	Not listed
Xtra Pine Oil Cleaner	Good	Pine oil
Raid Wasp and Hornet	Good	Petroleum products
Mega Glass Floor Finish	Good	Ethyl ether
UniKote Floor Cleaner	Good	Acrylic copolymer
Febreeze fabric refresher	Good	Not listed
Murphy's Oil Soap	Good	Not listed
Orange Glow Wood Cleaner	Good	Not listed
Comet with Bleach	Good	Not listed
Reliance Pine Oil Cleaner	Good	Pine oil
Hot Shot Flying Insect Killer	Good	Not listed
Kitchen		
Comet Spray Cleaner with Bleach	Good	Perfume
Pine Oil Cleaner (SYSCO)	Good	Not listed
Grease Terminator Grill Cleaner	Good	Not listed
Ultra Clean Detergent	Good	Not listed
Dining Room/Bar		
20 Small oil lamps on tables	Good/ open to air	Petroleum products
Beer, wine, liquor	Good	Ethanol
Basement		
A-1 Bleach	Good	NaOH, NaOCl
Crème Cleanser	Good	Alkyl-ammonium chloride
Sysco Blue Concentrate Cleaner	Good	Surfactants
Work Safe Kitchen Degreaser (SYSCO)	Good	Surfactants
Cleaner with Bleach (SYSCO)	Good	Surfactants
Sysco Green Detergent	Good	Surfactants

Table 2
SVI Sample Results
March 2007
28 Pike Street

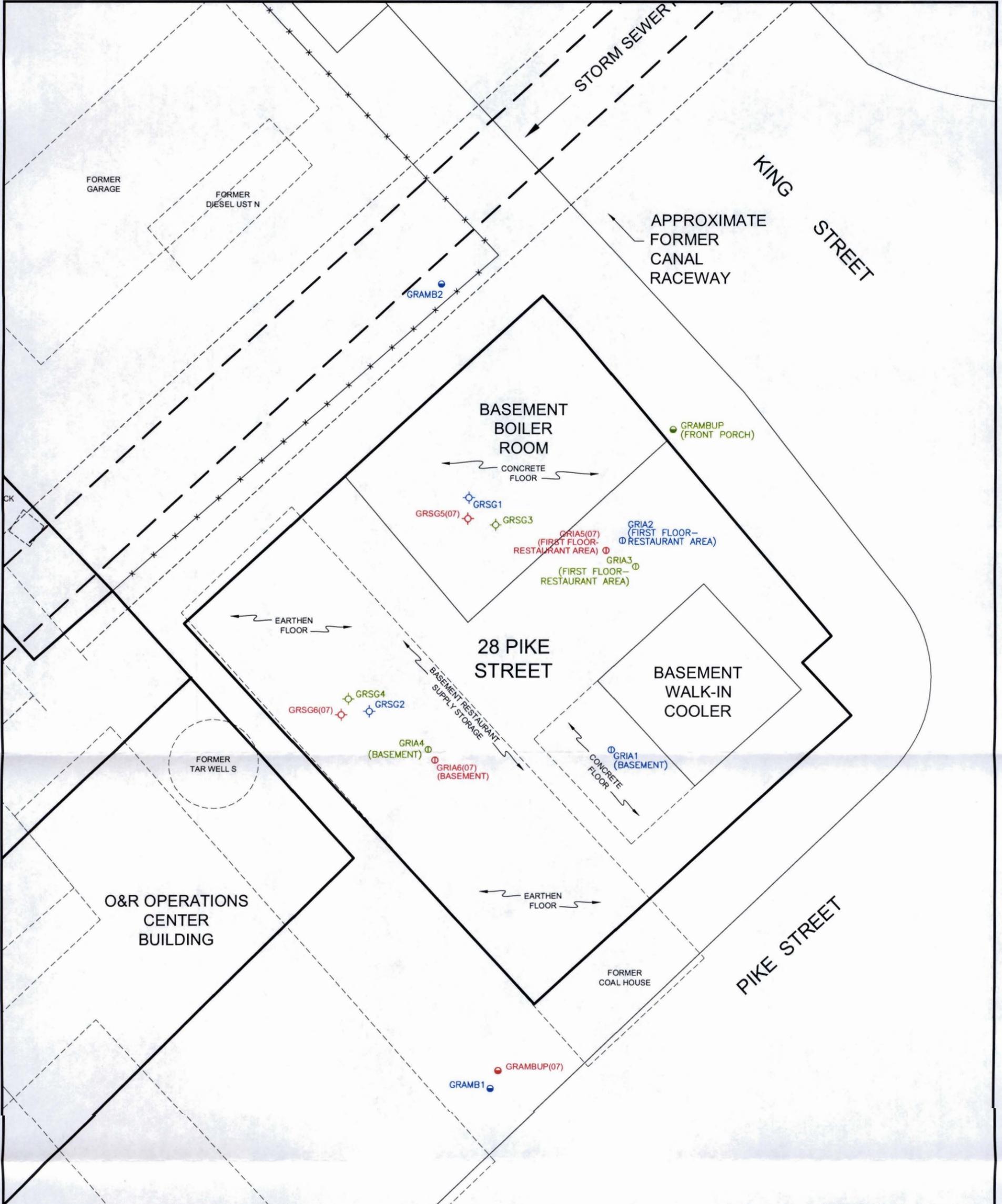
Location ID Type of Sample Sample ID Sample Date Lab Sample ID	CAS No.	Sub-slab Vapour		Basement		Indoor Air		Indoor Air		First Floor		Outdoor		NYSDOH Background Indoor Air Values ³	
		GRSG5(07) 3/20/2007	0703524A/B-04A/B	GRSG6(07) 3/20/2007	0703524A/B-05A/B	GRIA6(07) 3/20/2007	0703524A-01A/B	GRIA5(07) 3/20/2007	0703524A-02A/B	GRIA5(07)/DUP 3/20/2007	0703524A-03A/B	GRAMBUP(07) 3/20/2007	0703524A-06A/B	75th Percentile	90th Percentile
Possibly MGP Related or Other Sources (µg/m ³) ¹															
1,2,4-Triethylbenzene	95-53-6	0.78	U	1.2	U	0.75	U	0.79	U	0.76	U	0.72	U	4.3	9.5
1,3,5-Trimethylbenzene	108-67-8	0.78	U	0.78	U	0.75	U	0.79	U	0.76	U	0.72	U	1.7	3.6
2,2,4-Trimethylpentane	540-84-1	3.7	U	3.6	U	3.6	U	3.8	U	3.6	U	3.4	U	NL	NL
2,3-Dimethylpentane	985-99-3	3.2	U	3.2	U	3.1	U	3.3	U	3.2	U	3.2	U	2.2	7.5
2-Methylpentane	107-83-5	2.8	U	10	U	16	U	16	U	17	U	2.6	U	NL	NL
4-Ethyltoluene	622-96-8	3.9	U	3.8	U	3.7	U	4	U	3.8	U	3.6	U	NL	NL
Benzene	71-43-2	0.5	U	4	U	5.3	U	6	U	5.9	U	0.54	U	5.9	15
Carbon Disulfide	75-15-0	2.5	U	2.4	U	2.4	U	2.5	U	2.4	U	2.3	U	2.3	NL
Cyclohexane	110-82-7	2.7	U	2.8	U	2.9	U	4.4	U	4.9	U	2.5	U	2.6	8.1
Ethylbenzene	100-41-4	0.69	U	2.3	U	4	U	4.2	U	3.6	U	2.5	U	2.8	7.4
Heptane	142-82-5	3.2	U	4.1	U	5.1	U	5.7	U	6.2	U	3	U	7.6	19
Hexane	110-54-3	2.8	U	9.3	U	13	U	14	U	15	U	2.6	U	6	18
Indan	496-11-7	3.8	U	3.7	U	3.7	U	3.9	U	3.7	U	3.5	U	NL	NL
Indene	95-13-6	3.8	U	3.7	U	3.6	U	3.8	U	3.7	U	3.5	U	NL	NL
Isopentane	78-78-4	2.3	U	87	U	99	U	78	U	81	U	2.2	U	NL	NL
Naphthalene	91-20-3	4.1	U	4	U	4	U	4.2	U	4.1	U	3.8	U	NL	NL
Styrene	100-42-5	0.67	U	0.66	U	0.65	U	0.68	U	0.66	U	2.2	U	0.64	1.3
Thiophene	110-02-1	2.7	U	2.7	U	2.6	U	2.8	U	2.7	U	2.5	U	2.7	1.3
Toluene	108-88-3	0.69	U	8.4	U	5.6	U	5.8	U	6.3	U	1.3	U	24.8	58
m,p-Xylenes	136777-61-2	0.69	U	190	U	156	U	20	U	19	U	0.63	U	4.6	12
o-Xylene	95-47-6	0.69	U	89	U	84	U	10	U	9.3	U	0.63	U	3.1	7.6
Not MGP Related (µg/m³)²															
1,1,1-Trichloroethane (1,1,1-TCA)	71-55-6	0.86	U	0.84	U	0.83	U	0.88	U	0.84	U	0.8	U	1.1	3.1
1,1,2,2-Tetrachloroethane	79-34-5	1.1	U	1.1	U	1	U	1.1	U	1.1	U	1	U	<0.25	<0.25
1,1,2-Trichloroethane	79-00-5	0.86	U	0.84	U	0.83	U	0.84	U	0.84	U	0.8	U	<0.25	<0.25
1-Dichloroethane	75-34-3	0.64	U	0.63	U	0.62	U	0.65	U	0.63	U	0.59	U	<0.25	<0.25
1-Dichloroethene	75-35-4	0.63	U	0.61	U	0.6	U	0.61	U	0.61	U	0.58	U	<0.25	<0.25
1,2,4-Trichlorobenzene	120-82-1	5.9	U	5.8	U	5.6	U	6	U	5.8	U	5.4	U	<0.25	3.4
1,2-Dibromochloroethane (EDB)	106-93-4	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.1	U	<0.25	<0.25
1,2-Dichlorobenzene	95-50-1	0.95	U	0.93	U	0.91	U	0.97	U	0.93	U	0.88	U	<0.25	<0.25
1,2-Dichloroethane	107-06-2	0.64	U	0.63	U	0.62	U	0.65	U	0.63	U	0.59	U	<0.25	<0.25
1,2-Dichloropropane	78-87-5	0.73	U	0.72	U	0.7	U	0.74	U	0.72	U	0.67	U	<0.25	<0.25
1,3-Butadiene	106-99-0	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.6	U	NL	NL
1,3-Dichlorobenzene	541-73-1	0.95	U	0.93	U	0.91	U	0.97	U	0.93	U	0.88	U	<0.25	0.6
1,4-Dichlorobenzene	106-46-7	0.95	U	0.93	U	0.91	U	0.97	U	0.93	U	0.88	U	<0.25	0.6
1,4-Dioxane	123-91-1	2.8	U	2.8	U	2.7	U	2.9	U	2.8	U	2.6	U	NL	NL
2-Butanone (MEK)	78-93-3	4	U	2.3	U	2.2	U	2.4	U	2.3	U	3.7	U	7.3	16
2-Hexanone	591-78-6	3.2	U	3.2	U	3.1	U	3.3	U	3.2	U	3	U	NL	NL
4-Methyl-2-pentanone	109-10-1	3.2	U	3.2	U	3.1	U	3.3	U	3.2	U	3	U	0.86	2.2
Acetone	67-64-1	37	U	17	U	16	U	18	U	16	U	18	U	52	110
Benzyl chloride	100-44-7	0.82	U	0.8	U	0.79	U	0.83	U	0.8	U	0.76	U	NL	NL
Bromodichloromethane	100-44-7	0.82	U	0.8	U	0.79	U	0.83	U	0.8	U	0.76	U	NL	NL
Bromotoluene	75-27-4	5.3	U	5.2	U	5.1	U	5.4	U	5.2	U	4.9	U	NL	NL
Bromobenzene	75-28-2	8.2	U	8	U	7.8	U	8.3	U	8	U	7.5	U	NL	NL
Carbon Tetrachloride	74-83-9	1.1	U	1.2	U	0.76	U	0.88	U	0.74	U	0.8	U	<0.25	0.6
Chlorobenzene	56-23-5	0.99	U	0.98	U	0.96	U	1	U	0.98	U	0.92	U	0.59	0.81
Chloroethane	108-90-7	0.73	U	0.71	U	0.7	U	0.74	U	0.71	U	0.67	U	<0.25	<0.25
Chloroform	75-00-3	0.42	U	0.41	U	0.4	U	0.42	U	0.41	U	0.38	U	<0.25	<0.25
Chloromethane	67-66-3	0.77	U	1.2	U	1.5	U	0.94	U	0.76	U	0.71	U	0.54	1.4
cis-1,2-Dichloroethene	74-87-3	0.33	U	1.3	U	1.5	U	1.9	U	1.8	U	1.2	U	1.8	3.3
cis-1,3-Dichloropropene	156-59-2	0.63	U	0.61	U	0.6	U	0.64	U	0.61	U	0.58	U	<0.25	<0.25
Dibromochloromethane	10061-01-5	0.72	U	0.7	U	0.69	U	0.73	U	0.7	U	0.66	U	<0.25	<0.25
Dibromochloroethane	124-48-1	6.7	U	6.6	U	6.5	U	6.8	U	6.6	U	6.2	U	NL	NL
Ethanol	64-17-5	20	U	390	U	530	U	12	U	480	U	12	U	540	1400
Trichlorofluoromethane (Freon 11)	75-69-4	39	U	25	U	2.2	U	2.4	U	2.5	U	1.6	U	5.4	17
1,1,2-Trichlorofluoroethane (Freon 113)	76-13-1	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.1	U	1.1	1.8
1,2-Dichloroethylfluoroethane	76-14-2	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	<0.25	0.52
Dichlorodifluoromethane (Freon 12)	75-71-8	9.8	U	4.3	U	2.8	U	2.8	U	2.7	U	2.6	U	4.1	15
Hexachlorocyclotriphosphazene (C-46)	87-68-3	8.4	U	8.3	U	8.1	U	8.6	U	8.3	U	7.8	U	<0.25	4.6
Methyl tert-Butyl Ether	1524-04-4	2.8	U	2.8	U	2.7	U	2.9	U	2.8	U	2.6	U	5.6	27
Methylene Chloride (Dichloromethane)	75-09-2	0.95	U	0.94	U	0.93	U	0.92	U	0.92	U	0.91	U	6.6	22
Propene	67-63-0	1.9	U	1.9	U	1.9	U	2	U	1.9	U	1.8	U	NL	NL
Tetrahydrofuran	115-07-1	1.4	U	1.3	U	1.3	U	1.4	U	1.3	U	1.2	U	NL	NL
Tetrahydrofuran	127-18-4	88	U	38	U	1	U	1.1	U	1	U	0.99	U	1.1	2.9
trans-1,2-Dichloroethene	109-98-9	2.3	U	2.3	U	2.2	U	2.4	U	2.3	U	2.2	U	0.35	3.3
trans-1,3-Dichloroethene	106-48-5	3.1	U	3.1	U	3	U	3.2	U	3.1	U	2.9	U	NL	NL
Trichloroethene (TCE)	10061-02-6	0.72	U	0.7	U	0.69	U	0.73	U	0.7	U	0.66	U	<0.25	<0.25
Vinyl Chloride	75-01-4	0.85	U	0.83	U	0.82	U	0.85	U	0.83	U	0.78	U	<0.25	0.48
		0.4	U	0.4	U	0.39	U	0.41	U	0.4	U	0.37	U	<0.25	<0.25

Notes:

- All units in micrograms per cubic meter (µg/m³)
- 1 - These compounds may be related to either MGP sources or non-MGP sources, or both. MGP sources include MGP bars and petroleum feedstocks used in MGP processes, such as the carburized water gas process. Non-MGP sources include cleaning products, floor wax and polish, vehicle exhaust, construction materials, and cigarette smoke.
- 2 - These compounds are not related to MGP sources and are present due to non-MGP sources, such as vehicle exhaust, heating and air conditioning systems, cleaning agents, art supplies, paints, etc.
- 3 - New York State Department of Health, November 14, 2005.
- Bold** - Compound detected in a concentration greater than the method reporting limits.
- Exceeds NYSDOH Background Indoor Air Values 75th Percentile**
- Exceeds NYSDOH Background Indoor Air Values 90th Percentile**
- Dup - As suffix on Sample ID indicates that the sample is a field duplicate.
- NL - Not listed - data not available for background concentrations for these compounds.
- U - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- R - The data are unusable. The sample results are rejected due to serious deficiencies in the ability to meet quality control criteria. The presence or absence of the analyte cannot be verified.
- NJ - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
- NU - The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.
- J - The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be UJ - Inaccurate or Imprecise.

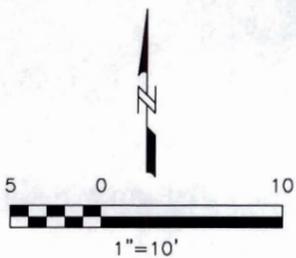
Table 3
SVI Sample Summary
28 Pike Street

Sample Location	Type of Sample	CAS No.	Basement - Boiler Room			Main Basement Area						First Floor			Outdoor				NYSDOH Background																
			Sub-slab Vapor	Sub-slab Vapor	Sub-slab Vapor	Soil Vapor	Soil Vapor	Soil Vapor	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Ambient	Ambient	Ambient	Ambient	Indoor Air Values ³																	
			6/22/2004	6/26/2006	3/20/2007	6/22/2004	6/26/2006	3/20/2007	6/22/2004	6/26/2006	3/20/2007	6/22/2004	6/26/2006	3/20/2007	6/22/2004	6/26/2006	3/20/2007																		
			0406427-06A	0606679B-06A	0703524A/B-04A/B	0406427-07A	0606679B-05A	0703524A/B-05A/B	0406427-03A	0606679A-01A	0703524A-01A/B	0406427-05A	0606679A-03A	0703524A-02A/B	0406427-01A	0406427-02A	0606679A-02A	0703524A-06A/B	75th Percentile	90th Percentile															
Sample ID	GRSG1	GRSG3	GRSG5(07)	GRSG2	GRSG4	GRSG6(07)	GRIA1	GRIA4	GRIA6(07)	GRIA2	GRIA3	GRIA5(07)	GRAMB-1	GRAMB-2	GRAMBUP	GRAMBUP(07)																			
Possibly MGP Related or Other Sources (µg/m³)¹																																			
1,2,4-Trimethylbenzene	95-63-6	9.3	1.0	0.78	U	8.3	0.79	U	1.2	U	4.5	7.8	U	0.75	U	3.5	12	U	0.79	U	1.8	2.0	1.2	0.72	U	4.3	9.5								
1,3,5-Trimethylbenzene	108-67-8	4.0	U	0.75	U	0.78	U	2.6	0.79	U	0.76	U	7.8	U	0.82	U	1.2	12	U	0.79	U	0.82	0.82	0.75	U	1.7	3.6								
2,2,4-Trimethylpentane	540-84-1	19	U	3.6	U	3.7	U	10	U	3.8	U	3.6	U	4.2	U	56	U	3.8	U	3.9	U	3.9	3.6	3.4	U	NL	NL								
2,3-Dimethylpentane	565-59-3	17	U	3.1	U	3.2	U	8.7	U	3.3	U	3.2	U	19	U	32	U	3.1	U	3.6	U	4.9	3.3	3.4	U	3.1	U	2.2	7.5						
2-Methylpentane	107-83-5	22	U	15	U	2.8	U	16	U	3.1	U	10	U	16	U	28	U	16	U	9.5	U	71	16	3.3	3.5	2.7	U	2.6	U	NL	NL				
4-Ethyltoluene	622-96-8	20	U	3.7	U	3.9	U	10	U	4.0	U	3.8	U	22	U	39	U	3.7	U	4.4	U	59	4	4.1	4.1	3.7	U	3.6	U	NL	NL				
Benzene	71-43-2	8.9	U	2.6	U	0.5	U	7.3	U	1.4	U	4	U	7.4	U	14	U	5.3	U	8.7	U	49	6	3.2	3.0	1.8	0.54	U	5.9	15					
Carbon Disulfide	75-15-0	13	U	5.8	U	2.5	U	16	U	13	U	2.4	U	14	U	25	U	2.4	U	2.8	U	37	U	2.5	U	6.8	2.6	U	2.3	U	NL	NL			
Cyclohexane	110-82-7	14	U	2.6	U	2.7	U	7.3	U	2.8	U	16	U	27	U	4	U	3.1	U	4.1	U	4.4	U	2.9	U	2.9	2.6	U	2.5	U	2.6	8.1			
Ethylbenzene	100-41-4	10	U	1.0	U	0.69	U	9.7	U	0.70	U	23	U	3.9	U	6.9	U	29	U	2.0	U	10	U	4.2	U	1.6	1.8	0.93	0.63	U	2.8	7.4			
Heptane	142-82-5	17	U	3.1	U	3.2	U	8.7	U	3.3	U	4.1	U	19	U	3.3	U	5.1	U	5.1	U	54	5.7	3.4	3.4	3.1	U	3	U	7.6	19				
Hexane	110-54-3	14	U	9.0	U	2.8	U	11	U	3.3	U	9.3	U	16	U	28	U	13	U	7.8	U	78	14	2.9	2.9	2.7	U	2.6	U	6	18				
Indan	496-11-7	20	U	3.7	U	3.8	U	10	U	3.9	U	3.7	U	22	U	39	U	3.7	U	4.3	U	58	3.9	4.0	4.0	3.7	U	3.5	U	NL	NL				
Indene	95-13-6	19	U	3.6	U	3.8	U	10	U	3.8	U	3.7	U	22	U	38	U	3.6	U	4.2	U	57	3.8	4.0	4.0	3.6	U	3.5	U	NL	NL				
Isopentane	78-784	58	U	97	U	2.3	U	46	U	21	U	87	U	390	U	240	U	99	U	82	U	360	78	11	12	7.8	2.2	U	NL	NL					
Naphthalene	91-20-3	21	U	4.0	U	4.1	U	11	U	4.2	U	4.1	U	24	U	4	U	4	U	4.7	U	63	4.2	4.4	4.4	4.0	U	3.8	U	NL	NL				
Styrene	100-42-5	3.5	U	0.65	U	0.67	U	1.8	U	0.68	U	0.66	U	5.1	U	6.7	U	0.65	U	2.3	U	10	U	0.68	U	0.71	U	0.65	U	0.62	U	0.64	1.3		
Thiophene	110-02-1	14	U	2.6	U	2.7	U	7.3	U	2.8	U	2.7	U	16	U	27	U	2.6	U	3.1	U	41	U	2.8	U	2.9	2.9	2.6	U	2.5	U	NL	NL		
Toluene	108-88-3	67	U	9.9	U	0.69	U	60	U	3.6	U	8.4	U	10	U	14	U	5.6	U	11	U	34	U	8.7	8.9	5.8	1.3	U	24.8	58					
m/p-Xylenes	136777-61-2	29	U	3.6	U	0.69	U	26	U	1.3	U	130	U	7.9	U	6.9	U	150	U	6.6	U	11	U	5.3	5.7	6.6	0.63	U	4.6	12					
o-Xylene	95-47-6	9.2	U	1.1	U	0.69	U	8.4	U	0.70	U	89	U	4.0	U	6.9	U	84	U	2.4	U	10	U	1.8	1.9	1.1	0.63	U	3.1	7.6					
Not MGP Related (µg/m³)⁴																																			
1,1,1-Trichloroethane (1,1,1-TCA)	71-55-6	4.5	U	0.83	U	0.86	U	2.3	U	0.88	U	0.84	U	5.0	U	8.6	U	0.83	U	0.97	U	13	U	0.88	U	0.91	U	0.91	U	0.83	U	0.8	U	1.1	3.1
1,1,2,2-Tetrachloroethane	79-34-5	5.6	U	1.0	U	1.1	U	2.9	U	1.1	U	1.1	U	6.2	U	11	U	1	U	1.2	U	16	U	1.1	U	1.1	U	1.0	U	1	U	<0.25	<0.25		
1,1,2-Trichloroethane	79-00-5	4.5	U	0.83	U	0.86	U	2.3	U	0.88	U	0.84	U	5.0	U	8.6	U	0.83	U	0.97	U	13	U	0.88	U	0.91	U	0.91	U	0.83	U	0.8	U	<0.25	<0.25
1,1-Dichloroethane	75-34-3	3.3	U	0.62	U	0.64	U	1.7	U	0.65	U	0.63	U	3.7	U	6.4	U	0.62	U	0.72	U	9.7	U	0.65	U	0.67	U	0.67	U	0.62	U	0.59	U	<0.25	<0.25
1,1-Dichloroethene	75-35-4	3.2	U	0.60	U	0.63	U	1.7	U	0.64	U	0.61	U	3.6	U	6.3	U	0.6	U	0.70	U	9.5	U	0.64	U	0.66	U	0.66	U	0.60	U	0.58	U	<0.25	<0.25
1,2,4-Trichlorobenzene	120-82-1	30	U	5.6	U	5.9	U	16	U	6.0	U	5.8	U	34	U	59	U	5.6	U	6.6	U	89	U	6	U	6.2	U	6.2	U	5.6	U	5.4	U	<0.25	3.4
1,2-Dibromoethane (EDB)	106-93-4	6.3	U	1.2	U	1.2	U	3.3	U	1.2	U	1.2	U	7.0	U	12	U	1.2	U	1.4	U	18	U	1.2	U	1.3	U	1.3	U	1.2	U	1.1	U	<0.25	<0.25
1,2-Dichlorobenzene	95-50-1	4.9	U	0.91	U	0.95	U	2.6	U	0.97	U	0.93	U	5.5	U	9.5	U	0.91	U	1.1	U	14	U	0.97	U	1.0	U	1.0	U	0.91	U	0.88	U	<0.25	0.72
1,2-Dichloroethane	107-06-2	3.3	U	0.62	U	0.64	U	1.7	U	0.65	U	0.63	U	3.7	U	6.4	U	0.62	U	0.72	U	9.7	U	0.65	U	0.67	U	0.67	U	0.62	U	0.59	U	<0.25	<0.25
1,2-Dichloropropane	78-87-5	3.8	U	0.70	U	0.73	U	2.0	U	0.74	U	0.72	U	4.2	U	7.3	U	0.7	U	0.82	U	11	U	0.74	U	0.77	U	0.77	U	0.70	U	0.67	U	<0.25	<0.25
1,3-Butadiene	106-99-0	9.0	U	1.7	U	1.7	U	4.7	U	1.9	U	1.7	U	10	U	17	U	1.7	U	3.0	U	26	U	1.8	U	1.8	U	1.8	U	1.7	U	1.6	U	NL	NL
1,3-Dichlorobenzene	541-73-1	4.9	U	0.91	U	0.95	U	2.6	U	0.97	U	0.93	U	5.5	U	9.5	U	0.91	U	1.1	U	14	U	0.97	U	1.0	U	1.0	U	0.91	U	0.88	U	<0.25	0.6
1,4-Dichlorobenzene	106-46-7	4.9	U	0.91	U	0.95	U	2.6	U	0.97	U	0.93	U	5.5	U	9.5	U	0.91	U	1.1	U	14	U	0.97	U	1.0	U	1.0	U	0.91	U	0.88	U	0.54	1.3
1,4-Dioxane	123-91-1	15	U	2.7	U	2.8	U	7.7	U	2.9	U	2.8	U	16	U	28	U	2.7	U	3.2	U	43	U	2.9	U	3.0	U	3.0	U	2.7	U	2.6	U	NL	NL
2-Butanone (MEK)	78-93-3	22	U	4.7	U	4	U	19	U	12	U	2.3	U	13	U	23	U	2.2	U	3.3	U	35	U	2.4	U	2.5	U	3.2	U	2.2	U	3.7	U	7.3	16
2-Hexanone	591-78-6	17	U	3.1	U	3.2	U	8.7	U	3.3	U	3.2	U	19	U	32	U	3.1	U	3.6	U	49	U	3.3	U	3.4	U	3.4	U	3.1	U	3	U	NL	NL
4-Methyl-2-pentanone	108-10-1	17	U	3.1	U	3.2	U	8.7	U	3.3	U	3.2	U	19	U	32	U	3.1	U	3.6	U	49	U	3.3	U	3.4	U	3.4	U	3.1	U	3	U	0.86	2.2
Acetone	67-64-1	120	U	17	U	37	U	110	U	54	U	17	U	27	U	28	U	11	U	23	U	83	U	15	U	13	U	19	U	13	U	16			



LEGEND

- ◆ GRSG4 2007 SVI SUB-FLOOR OR SUB-SLAB VAPOR SAMPLE LOCATION
- ⊙ GRIA4 2007 SVI INDOOR AIR SAMPLE LOCATION
- GRAMBUP 2007 SVI AMBIENT AIR SAMPLE LOCATION
- ◆ ◆ PREVIOUS SOIL VAPOR OR SUB-FLOOR SOIL VAPOR SAMPLE LOCATION
- ⊙ ⊙ PREVIOUS INDOOR AIR SAMPLE LOCATION
- ● PREVIOUS AMBIENT AIR SAMPLE LOCATION
- APPROXIMATE PROPERTY LINE
- x-x- FENCE
- ▭ EXISTING STRUCTURES
- - - - - SUBSURFACE OR HISTORIC STRUCTURES



SOURCE: DONALD STEDGE PLS: 2000
LANGAN ENGINEERS PLS: 2003
ROBERT MURRAY PLS: 2004

28 PIKE STREET SECTION
PORT JERVIS MGP SITE
ORAN2-20146

MARCH 2007
SVI SAMPLE LOCATIONS
28 PIKE STREET

DATE: 4/19/07

DRWN: MAW/BIL

FIGURE 1

Appendix A

NYSDOH Indoor Air Quality Questionnaire and Building Inventory



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

Preparer's Name: Jesse Lloyd, James Edwards

Date Prepared: March 19, 2007

Preparer's Affiliation: The RETEC Group, Inc.

Phone No: 1-607-277-5716

Purpose of Investigation:

To evaluate current indoor air conditions and potential infiltration of soil vapor to the indoor air.

1. OCCUPANT: Multiple

Interviewed: (Y) N

Last Name: Codichini

First Name: Rich

Address: 28 Pike Street, Port Jervis, New York 12771

County: Orange

Home Phone: (845) 856-3905

Office Phone:

Number of Occupants/persons at this location: Occupants in the restaurant area only during open hours.
Occupants on second floor in apartments.

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

Interviewed: (Y) N

Last Name: Codichini

First Name: Rich

Address: As Above

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

Raised Ranch

Cape Cod

Duplex

Modular

2-Family

Split Level

Contemporary

Apartment House

Log Home

3-Family

Colonial

Mobile Home

Townhouses/Condos

(Other) Apartments above restaurant

If multiple units, how many? Four

If the property is commercial, type? (Yes) first floor

Business Type(s): Restaurant

Does it include residences (i.e., multi-use)? Yes
second and third floors.

If yes, how many? Four apartments on

Other characteristics:

Number of floors: 3

Building age: 1880s

Is the building insulated? Y / N

How air tight? Tight / Average / Not Tight

4. AIRFLOW

Airflow between floors:

No airflow observed at basement to first or first to second staircases.

Airflow near source:

Very slight upward flow from basement.

Outdoor air infiltration:

Some infiltration at kitchen door, very slight infiltration at front door.

Infiltration into air ducts:

None observed.

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

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other:
- 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 partly finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: 7 (feet)

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

Large area of basement floor is earthen, remainder is concrete in the boiler room and in front of the basement walk-in cooler. Foundation walls are laid-up stone. Basement is frequently flooded.

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 Heat pump Hot water baseboard
Space Heaters Stream radiation Radiant floor
Electric baseboard Wood Stove Outdoor wood boiler Other:

The primary type of fuel used is:

Natural Gas Fuel Oil Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: Natural gas

Boiler/furnace located in: Basement Outdoor Main Floor Other:

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? No, with the exception of ventilation fans above the stoves in the restaurant kitchen.

Describe the supply and 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,

NA

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: Storage of restaurant supplies, boiler room for the building, walk-in cooler.

1st Floor: Restaurant, kitchen, tavern

2nd Floor: Apartments

3rd Floor: Apartments

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?
products (degreasers, glass and surface cleaner)

Y N When & Type? Kitchen cleaning

i. Have cosmetic products been used recently? Unknown

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?
freshener in bathrooms

Y N When & Type? Automatic air

m. Is there a kitchen exhaust fan?
building

Y N If yes, where vented? North side of

n. Is there a bathroom exhaust fan?
west.

Y N If yes, where vented? Outside wall to

o. Is there a clothes dryer?

Y / N If yes, is it vented outside?

p. Has there been a pesticide application?

Y / N When & Type?

Are there odors in the building?

Y / N

If yes, please describe: Food odors in kitchen (cooking oil, grease, spices), musty odor in basement, cleaning supply odor (ammonia-like, fragrances) in first floor store room, air freshener odor near bathrooms.

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)

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

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

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:

Appendix B

Chain of Custody Record and Form I Laboratory Sheets



Chain of Custody Record

No 0400

The RETEC Group, Inc.
 1321 W. Seneca Street, Suite 201 - Ithaca, NY 14850-3342
 (607) 277-6113 Phone - (607) 277-6357 Fax
 www.retec.com

0703524



Project Name: 28 PIKE STREET	Project Number: CRANZ								
Send Report To: JAMES EDWARDS	Sampler (Print Name): JAMES EDWARDS								
Address: 1001 WEST SENeca	Sampler (Print Name): JESSE LLOYD								
STE 204	Shipment Method: FEDEX								
ITHACA NY 14850	Anal. Lab. Number:								
Phone: 607.277.5716	Laboratory Receiving: STL								
Fax: 607.277.9057	Start Time: End Time Cont'd								
Field Sample ID	Sample ID	Sample Name	Matrix	Number of Containers	Analysis Requested	Purchase Order #	Pressure Start	Pressure End	Date

Analysis Requested:
 TOIS LOW-LEVEL
 X HgP Indicator
 COMPOUND
 HELIUM
 ASTM
 RECEIPT
 1/22/3/23/07

Field Sample ID	Sample ID	Sample Name	Matrix	Number of Containers	Analysis Requested	Pressure Start	Pressure End	Date
21A	GRIA6(07)	0816 H06	12081-20681	X		3.5" Hg	-31.0 -5.5	3-20-07
22A	GRIA5(07)	0824 H11	12953	X		5.0" Hg	-31.0 -5.5	
23A	GRIA50(07)	0825 H203	1583	X		4.0" Hg	-31.0 -5.5	
24A	GR5G5(07)	0812 H047	22081-101568	X	X	4.5" Hg	-28.5 -4.5	
25A	GR5G6(07)	0809 H052	12081	X	X	4.0" Hg	-31.0 -5.5	
26A	GRAMBUP(07)	0821 H22	39999	X		2.5" Hg	-31.0 -5.5	

* CALL RETEC
 prior to sample
 dilution *

Relinquished by (Signature):	Received by (Signature):	Date: 3-20-07	Time: 1700	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level: Level I <input type="checkbox"/> Routine <input type="checkbox"/> Level II <input type="checkbox"/> 24 Hour <input type="checkbox"/> Level III <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/> Other _____ Turnaround: _____ Sample Receipt: Total # Containers Received? _____ OOC Seal's Intact? _____ OOC Seal's Intact? _____ Received Containers Intact? _____ Temperature? _____
Relinquished by (Signature):	Received by (Signature):	Date: 3/20/07	Time: 915	
Relinquished by (Signature): _____	Received by (Signature): _____	Date: _____	Time: _____	

White: Lab Copy Yellow: Pnl Copy Pink: Field Copy Gold: PMQA/QC Copy
 FAX EX 85967259.0903

CUSTODY SEAL INTACT?
 Y N NONE TEMP



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG5(07)

Lab ID#: 0703524A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	070226	Date of Collection	3/20/07
Dil. Factor	1.58	Date of Analysis	4/3/07 06:26 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.16	2.0	0.78	9.8
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	Not Detected	0.33	Not Detected
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
Bromomethane	0.16	0.29 BU	0.61	1.1 BU
Chloroethane	0.16 uJ	Not Detected	0.42 uJ	Not Detected
Freon 11	0.16	6.9	0.89	39
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
Methylene Chloride	0.16	Not Detected	0.55	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.99	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.85	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
Toluene	0.16	0.18	0.60	0.69
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	13	1.1	89
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
Styrene	0.16	Not Detected	0.67	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79 uJ	Not Detected U J	5.9 uJ	Not Detected U J
Hexachlorobutadiene	0.79	Not Detected	8.4	Not Detected
Propylene	0.79	Not Detected	1.4	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG5(07)

Lab ID#: 0703524A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	07040226	Date of Collection:	3/20/07
Dil. Factor:	1.58	Date of Analysis:	4/3/07 06:26 AM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.79	Not Detected	1.7	Not Detected
Acetone	0.79	16	1.9	37
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
trans-1,2-Dichloroethene	0.79	Not Detected	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	1.4	2.3	4.0
Hexane	0.79	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Cyclohexane	0.79	Not Detected	2.7	Not Detected
1,4-Dioxane	0.79	Not Detected	2.8	Not Detected
Bromodichloromethane	0.79	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	0.79	Not Detected	3.2	Not Detected
2-Hexanone	0.79	Not Detected	3.2	Not Detected
Dibromochloromethane	0.79	Not Detected	6.7	Not Detected
Bromoform	0.79	Not Detected	8.2	Not Detected
4-Ethyltoluene	0.79	Not Detected	3.9	Not Detected
Ethanol	0.79	10	1.5	20
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
Heptane	0.79	Not Detected	3.2	Not Detected
Naphthalene	0.79	Not Detected	4.1	Not Detected
2-Methylpentane	0.79	Not Detected	2.8	Not Detected
Isopentane	0.79	Not Detected	2.3	Not Detected
2,3-Dimethylpentane	0.79	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Indene	0.79	Not Detected	3.8	Not Detected
Indan	0.79	Not Detected	3.8	Not Detected
Thiophene	0.79	Not Detected	2.7	Not Detected
2-Propanol	0.79	Not Detected	1.9	Not Detected

~~B = Compound present in laboratory blank greater than reporting limit, background subtraction not performed~~
 UJ = Non-detected compound associated with low bias in the CCV

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown	NA	NA	44 J
Unknown	NA	NA	680 J
Unknown	NA	NA	36 J
Unknown	NA	NA	2.6 J
Acetaldehyde	75-07-0	64%	3.1 N J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG5(07)

Lab ID#: 0703524A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3080226	Date of Collection:	3/20/07
Dil. Factor:	1.58	Date of Analysis:	4/3/07 06:26 AM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown	NA	NA	2.1 J
Unknown	NA	NA	1.6 J
Unknown	NA	NA	1.8 J
Heptanal	111-71-7	58%	1.6 N J
Unknown	NA	NA	1.7 J

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	100	70-130
Toluene-d8	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG5(07)

Lab ID#: 0703524A-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name	3040312	Date of Collection	3/20/07
Dil. Factor	1.58	Date of Analysis	4/3/07 08:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.16	Not Detected	0.50	Not Detected

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	111	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG5(07)

Lab ID#: 0703524B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	90324086	Date of Collection:	3/20/07
Dil. Factor:	1.58	Date of Analysis:	3/24/07 12:11 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.079	Not Detected

Container Type: 6 Liter Summa Special (100% Certified)



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA5(07)

Lab ID#: 0703524A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	g040224	Date of Collection:	3/20/07
Dil. Factor:	1.61	Date of Analysis:	4/3/07 05:07 AM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.16	0.57	0.80	2.8
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.92 β J	0.33	1.9 β J
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
Bromomethane	0.16	0.18 β U	0.62	0.68 β U
Chloroethane	0.16 <i>UJ</i>	Not Detected	0.42 <i>UJ</i>	Not Detected
Freon 11	0.16	0.43	0.90	2.4
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
Methylene Chloride	0.16	0.18 J	0.56	0.62 J
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloroform	0.16	0.19 J	0.79	0.94 J
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Trichloroethene	0.16	Not Detected	0.86	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
Toluene	0.16	1.6	0.61	5.8
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	0.97	0.70	4.2
m,p-Xylene	0.16	4.7	0.70	20
o-Xylene	0.16	2.3	0.70	10
Styrene	0.16	Not Detected	0.68	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80 <i>UJ</i>	Not Detected U J	6.0 <i>UJ</i>	Not Detected U J
Hexachlorobutadiene	0.80	Not Detected	8.6	Not Detected
Propylene	0.80	Not Detected	1.4	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA5(07)

Lab ID#: 0703524A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	0703524A-02A	Date of Collection	6/20/07
Dil. Factor	1.0	Date of Analysis	6/20/07 05:07 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.80	Not Detected	1.8	Not Detected
Acetone	0.80	6.2	1.9	15
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
trans-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	Not Detected	2.4	Not Detected
Hexane	0.80	4.1	2.8	14
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Cyclohexane	0.80	1.3	2.8	4.4
1,4-Dioxane	0.80	Not Detected	2.9	Not Detected
Bromodichloromethane	0.80	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	0.80	Not Detected	3.3	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected
Dibromochloromethane	0.80	Not Detected	6.8	Not Detected
Bromoform	0.80	Not Detected	8.3	Not Detected
4-Ethyltoluene	0.80	Not Detected	4.0	Not Detected
Ethanol	0.80	270 E J	1.5	520 E J
Methyl tert-butyl ether	0.80	Not Detected	2.9	Not Detected
Heptane	0.80	1.4	3.3	5.7
Naphthalene	0.80	Not Detected	4.2	Not Detected
2-Methylpentane	0.80	4.5	2.8	16
Isopentane	0.80	26	2.4	78
2,3-Dimethylpentane	0.80	Not Detected	3.3	Not Detected
2,2,4-Trimethylpentane	0.80	Not Detected	3.8	Not Detected
Indene	0.80	Not Detected	3.8	Not Detected
Indan	0.80	Not Detected	3.9	Not Detected
Thiophene	0.80	Not Detected	2.8	Not Detected
2-Propanol	0.80	Not Detected	2.0	Not Detected

~~B = Compound present in laboratory blank greater than reporting limit, background subtraction not performed.~~
 UJ = Non-detected compound associated with low bias in the CCV

~~E = Exceeds instrument calibration range.~~

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown	NA	NA	22 J
Methane, chlorodifluoro-	75-45-6	11%	3.0 N J
Propane, 2-methyl-	75-28-5	59%	51 N J
Butane	106-97-8	72%	50 N J
Unknown	NA	NA	4.4 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA5(07)

Lab ID#: 0703524A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	g040224	Date of Collection:	3/20/07
Dil. Factor:	1.61	Date of Analysis:	4/3/07 05:07 AM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Pentane	109-66-0	90%	24 N J
Cyclobutane, ethyl-	4806-61-5	53%	4.9 N J
Unknown	NA	NA	4.2 J
Benzaldehyde	100-52-7	96%	4.3 N J
Unknown	NA	NA	16 J

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	97	70-130
Toluene-d8	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA5(07)

Lab ID#: 0703524A-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	6040310	Date of Collection:	4/20/07
Dil. Factor:	1.61	Date of Analysis:	4/3/07 06:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.16	1.9	0.51	6.0

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	110	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA50(07)

Lab ID#: 0703524A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0040225	Date of Collection:	3/20/07
Client:	155	Date of Analysis:	4/3/07 05:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.16	0.55	0.77	2.7
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.90 U J	0.32	1.8 U J
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
Bromomethane	0.16	0.19 U U	0.60	0.74 U U
Chloroethane	0.16 U U	Not Detected	0.41 U U	Not Detected
Freon 11	0.16	0.44	0.87	2.5
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
Methylene Chloride	0.16	0.17 J	0.54	0.58 J
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroform	0.16 U U	Not Detected	0.76 U U	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.98	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Trichloroethene	0.16	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
Toluene	0.16	1.7	0.58	6.3
trans-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	0.82	0.67	3.6
m,p-Xylene	0.16	4.4	0.67	19
o-Xylene	0.16	2.1	0.67	9.3
Styrene	0.16	Not Detected	0.66	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,2,4-Trichlorobenzene	0.78 U U	Not Detected U J	5.8 U U	Not Detected U J
Hexachlorobutadiene	0.78	Not Detected	8.3	Not Detected
Propylene	0.78	Not Detected	1.3	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA50(07)

Lab ID#: 0703524A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0703524A-03A	Date of Collection:	3/20/07
Oil Factor:	1.65	Date of Analysis:	4/3/07 05:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.78	Not Detected	1.7	Not Detected
Acetone	0.78	6.6	1.8	16
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
Hexane	0.78	4.4	2.7	15
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Cyclohexane	0.78	1.4	2.7	4.9
1,4-Dioxane	0.78	Not Detected	2.8	Not Detected
Bromodichloromethane	0.78	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	0.78	Not Detected	3.2	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected
Dibromochloromethane	0.78	Not Detected	6.6	Not Detected
Bromoform	0.78	Not Detected	8.0	Not Detected
4-Ethyltoluene	0.78	Not Detected	3.8	Not Detected
Ethanol	0.78	260 EJ	1.5	490 EJ
Methyl tert-butyl ether	0.78	Not Detected	2.8	Not Detected
Heptane	0.78	1.5	3.2	6.2
Naphthalene	0.78	Not Detected	4.1	Not Detected
2-Methylpentane	0.78	4.9	2.7	17
Isopentane	0.78	27	2.3	81
2,3-Dimethylpentane	0.78	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Indene	0.78	Not Detected	3.7	Not Detected
Indan	0.78	Not Detected	3.7	Not Detected
Thiophene	0.78	Not Detected	2.7	Not Detected
2-Propanol	0.78	Not Detected	1.9	Not Detected

~~B = Compound present in laboratory blank greater than reporting limit, background subtraction not performed.~~

UJ = Non-detected compound associated with low bias in the CCV

~~E = Exceeds instrument calibration range.~~

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown	NA	NA	26 J
Propane, 2-methyl-	75-28-5	59%	52 N J
Butane	106-97-8	72%	48 N J
Unknown	NA	NA	4.3 J
Pentane	109-66-0	90%	25 N J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA50(07)

Lab ID#: 0703524A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	g040225	Date of Collection	3/2007
Dil. Factor	1.55	Date of Analysis	4/3/07 05:41 AM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Pentane, 3-methyl-	96-14-0	80%	5.3 N J
Hexane, 3-methyl-	589-34-4	81%	3.4 N J
Cyclotrisiloxane, hexamethyl-	541-05-9	72%	3.9 N J
Unknown	NA	NA	4.1 J
Unknown	NA	NA	8.8 J

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	100	70-130
Toluene-d8	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA50(07)

Lab ID#: 0703524A-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name	6040311	Date of Collection	3/20/07
Dil. Factor	1.55	Date of Analysis	4/3/07 07:44 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.16	1.8	0.50	5.9

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	113	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG6(07)

Lab ID#: 0703524A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	g040227	Date of Collection	3/20/07
Dil. Factor	1.55	Date of Analysis	4/3/07 10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.16	0.87	0.77	4.3
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.62 U	0.32	1.3 U
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
Bromomethane	0.16	0.32 U	0.60	1.2 U
Chloroethane	0.16 UJ	Not Detected	0.41 UJ	Not Detected
Freon 11	0.16	4.4	0.87	25
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Freon 113	0.16	Not Detected	1.2	Not Detected
Methylene Chloride	0.16	Not Detected	0.54	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroform	0.16	0.25	0.76	1.2
1,1,1-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.98	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Trichloroethene	0.16	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
Toluene	0.16	2.2	0.58	8.4
trans-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	3.0	1.0	20
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	5.4	0.67	23
m,p-Xylene	0.16	31	0.67	130
o-Xylene	0.16	20	0.67	89
Styrene	0.16	Not Detected	0.66	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	0.24	0.76	1.2
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,2,4-Trichlorobenzene	0.78 UJ	Not Detected U J	5.8 UJ	Not Detected U J
Hexachlorobutadiene	0.78	Not Detected	8.3	Not Detected
Propylene	0.78	Not Detected	1.3	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG6(07)

Lab ID#: 0703524A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 0703524A-05A	Date of Collection: 3/20/07
Dil. Factor: 1.55	Date of Analysis: 4/3/07 07:10 AM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.78	Not Detected	1.7	Not Detected
Acetone	0.78	7.4	1.8	17
Carbon Disulfide	0.78	Not Detected	2.4	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	Not Detected	2.3	Not Detected
Hexane	0.78	2.6	2.7	9.3
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Cyclohexane	0.78	0.82	2.7	2.8
1,4-Dioxane	0.78	Not Detected	2.8	Not Detected
Bromodichloromethane	0.78	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	0.78	Not Detected	3.2	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected
Dibromochloromethane	0.78	Not Detected	6.6	Not Detected
Bromoform	0.78	Not Detected	8.0	Not Detected
4-Ethyltoluene	0.78	Not Detected	3.8	Not Detected
Ethanol	0.78	180 EJ	1.5	330 EJ
Methyl tert-butyl ether	0.78	Not Detected	2.8	Not Detected
Heptane	0.78	1.0	3.2	4.1
Naphthalene	0.78	Not Detected	4.1	Not Detected
2-Methylpentane	0.78	3.0	2.7	10
Isopentane	0.78	29	2.3	87
2,3-Dimethylpentane	0.78	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Indene	0.78	Not Detected	3.7	Not Detected
Indan	0.78	Not Detected	3.7	Not Detected
Thiophene	0.78	Not Detected	2.7	Not Detected
2-Propanol	0.78	Not Detected	1.9	Not Detected

~~B = Compound present in laboratory blank greater than reporting limit, background subtraction not performed.~~

UJ = Non-detected compound associated with low bias in the CCV

~~E = Exceeds instrument calibration range.~~

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown	NA	NA	19 J
Unknown	NA	NA	20 J
Methane, chlorodifluoro-	75-45-6	83%	6.3 N J
Propane, 2-methyl-	75-28-5	59%	36 N J
Butane	106-97-8	80%	35 N J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG6(07)

Lab ID#: 0703524A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	0703524A-05A	Date of Collection	3/20/07
Dil. Factor	1:55	Date of Analysis	4/3/07 07:10 AM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetaldehyde	75-07-0	9.0%	3.6 N J
Pentane	109-66-0	90%	15 N J
Pentane, 3-methyl-	96-14-0	64%	3.6 N J
Octadecane, 2-methyl-	1560-88-9	64%	2.9 N J
Dodecane, 2,7,10-trimethyl-	74645-98-0	90%	6.3 N J

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
4-Bromofluorobenzene	104	70-130
Toluene-d8	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG6(07)

Lab ID#: 0703524A-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name	0120114	Date of Collection	3/20/07
Dil. Factor	1.65	Date of Analysis	4/3/07 10:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.16	1.3	0.50	4.0

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	112	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRSG6(07)

Lab ID#: 0703524B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name	90324076	Date of Collection	3/20/07
Dil Factor	1.55	Date of Analysis	3/24/07 12:47 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.078	Not Detected

Container Type: 6 Liter Summa Special (100% Certified)



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA6(07)

Lab ID#: 0703524A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	0703524A	Date of Collection	3/20/07
Dil. Factor	1.52	Date of Analysis	4/3/07 04:21 AM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.15	0.56	0.75	2.8
Freon 114	0.15	Not Detected	1.1	Not Detected
Chloromethane	0.15	0.74 RU	0.31	1.5 RU
Vinyl Chloride	0.15	Not Detected	0.39	Not Detected
Bromomethane	0.15	0.20 RU	0.59	0.76 RU
Chloroethane	0.15 uJ	Not Detected	0.40 uJ	Not Detected
Freon 11	0.15	0.39	0.85	2.2
1,1-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Freon 113	0.15	Not Detected	1.2	Not Detected
Methylene Chloride	0.15	Not Detected	0.53	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.62	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroform	0.15	0.30	0.74	1.5
1,1,1-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.96	Not Detected
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Trichloroethene	0.15	Not Detected	0.82	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.70	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.69	Not Detected
Toluene	0.15	1.5	0.57	5.6
trans-1,3-Dichloropropene	0.15	Not Detected	0.69	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Chlorobenzene	0.15	Not Detected	0.70	Not Detected
Ethyl Benzene	0.15	6.8	0.66	29
m,p-Xylene	0.15	35	0.66	150
o-Xylene	0.15	19	0.66	84
Styrene	0.15	Not Detected	0.65	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.75	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.75	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.79	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,2,4-Trichlorobenzene	0.76 uJ	Not Detected U J	5.6 uJ	Not Detected U J
Hexachlorobutadiene	0.76	Not Detected	8.1	Not Detected
Propylene	0.76	Not Detected	1.3	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA6(07)

Lab ID#: 0703524A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	g040223	Date of Collection:	3/20/07
Dil. Factor:	1.52	Date of Analysis:	3/3/07 04:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.76	Not Detected	1.7	Not Detected
Acetone	0.76	4.6	1.8	11
Carbon Disulfide	0.76	Not Detected	2.4	Not Detected
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.76	Not Detected	2.2	Not Detected
Hexane	0.76	3.7	2.7	13
Tetrahydrofuran	0.76	Not Detected	2.2	Not Detected
Cyclohexane	0.76	1.2	2.6	4.0
1,4-Dioxane	0.76	Not Detected	2.7	Not Detected
Bromodichloromethane	0.76	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	0.76	Not Detected	3.1	Not Detected
2-Hexanone	0.76	Not Detected	3.1	Not Detected
Dibromochloromethane	0.76	Not Detected	6.5	Not Detected
Bromoform	0.76	Not Detected	7.8	Not Detected
4-Ethyltoluene	0.76	Not Detected	3.7	Not Detected
Ethanol	0.76	280 EJ	1.4	530 EJ
Methyl tert-butyl ether	0.76	Not Detected	2.7	Not Detected
Heptane	0.76	1.2	3.1	5.1
Naphthalene	0.76	Not Detected	4.0	Not Detected
2-Methylpentane	0.76	4.4	2.7	16
Isopentane	0.76	34	2.2	99
2,3-Dimethylpentane	0.76	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.6	Not Detected
Indene	0.76	Not Detected	3.6	Not Detected
Indan	0.76	Not Detected	3.7	Not Detected
Thiophene	0.76	Not Detected	2.6	Not Detected
2-Propanol	0.76	Not Detected	1.9	Not Detected

~~B = Compound present in laboratory blank greater than reporting limit, background subtraction not performed.~~
 UJ = Non-detected compound associated with low bias in the CCV

~~E = Exceeds instrument calibration range.~~

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Unknown	NA	NA	21 J
Methane, chlorodifluoro-	75-45-6	10%	9.9 N J
Propane, 2-methyl-	75-28-5	9.0%	49 N J
Unknown	NA	NA	4.1 J
Butane	106-97-8	72%	45 N J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA6(07)

Lab ID#: 0703524A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	07040223	Date of Collection	3/20/07
Dil. Factor	1.52	Date of Analysis	4/3/07 04:21 AM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetaldehyde	75-07-0	86%	5.2 N J
Pentane	109-66-0	90%	22 N J
Cyclopropane, propyl-	2415-72-7	53%	4.4 N J
2-Pentene, 2,3-dimethyl-	10574-37-5	81%	2.7 N J
Unknown	NA	NA	3.8 J

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	105	70-130
Toluene-d8	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRIA6(07)

Lab ID#: 0703524A-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	6040308	Date of Collection:	3/20/07
Dil. Factor:	1.52	Date of Analysis:	4/3/07 05:07 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rot. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.15	1.6	0.48	5.3

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	111	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRAMBUP(07)

Lab ID#: 0703524A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0703524A-06A	Date of Collection:	3/2007
Dil Factor:	1.46	Date of Analysis:	4/3/07 08:13 AM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.15	0.53	0.72	2.6
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.15	0.59 <i>BU</i>	0.30	1.2 <i>BU</i>
Vinyl Chloride	0.15	Not Detected	0.37	Not Detected
Bromomethane	0.15	0.21 <i>BU</i>	0.57	0.80 <i>BU</i>
Chloroethane	0.15 <i>uJ</i>	Not Detected	0.38 <i>uJ</i>	Not Detected
Freon 11	0.15	0.28	0.82	1.6
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Freon 113	0.15	Not Detected	1.1	Not Detected
Methylene Chloride	0.15	Not Detected	0.51	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.59	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Chloroform	0.15	Not Detected	0.71	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Carbon Tetrachloride	0.15	Not Detected	0.92	Not Detected
1,2-Dichloroethane	0.15	Not Detected	0.59	Not Detected
Trichloroethene	0.15	Not Detected	0.78	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
Toluene	0.15	0.34	0.55	1.3
trans-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Tetrachloroethene	0.15	Not Detected	0.99	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.67	Not Detected
Ethyl Benzene	0.15	Not Detected	0.63	Not Detected
m,p-Xylene	0.15	Not Detected	0.63	Not Detected
o-Xylene	0.15	Not Detected	0.63	Not Detected
Styrene	0.15	Not Detected	0.62	Not Detected
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.76	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,2,4-Trichlorobenzene	0.73 <i>uJ</i>	Not Detected <i>U J</i>	5.4 <i>uJ</i>	Not Detected <i>U J</i>
Hexachlorobutadiene	0.73	Not Detected	7.8	Not Detected
Propylene	0.73	Not Detected	1.2	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRAMBUP(07)

Lab ID#: 0703524A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0040228	Date of Collection:	3/20/07
Dil. Factor:	1.46	Date of Analysis:	4/3/07 08:13 AM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.73	Not Detected	1.6	Not Detected
Acetone	0.73	6.9	1.7	16
Carbon Disulfide	0.73	Not Detected	2.3	Not Detected
trans-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.73	1.3	2.2	3.7
Hexane	0.73	Not Detected	2.6	Not Detected
Tetrahydrofuran	0.73	Not Detected	2.2	Not Detected
Cyclohexane	0.73	Not Detected	2.5	Not Detected
1,4-Dioxane	0.73	Not Detected	2.6	Not Detected
Bromodichloromethane	0.73	Not Detected	4.9	Not Detected
4-Methyl-2-pentanone	0.73	Not Detected	3.0	Not Detected
2-Hexanone	0.73	Not Detected	3.0	Not Detected
Dibromochloromethane	0.73	Not Detected	6.2	Not Detected
Bromoform	0.73	Not Detected	7.5	Not Detected
4-Ethyltoluene	0.73	Not Detected	3.6	Not Detected
Ethanol	0.73	6.4	1.4	12
Methyl tert-butyl ether	0.73	Not Detected	2.6	Not Detected
Heptane	0.73	Not Detected	3.0	Not Detected
Naphthalene	0.73	Not Detected	3.8	Not Detected
2-Methylpentane	0.73	Not Detected	2.6	Not Detected
Isopentane	0.73	Not Detected	2.2	Not Detected
2,3-Dimethylpentane	0.73	Not Detected	3.0	Not Detected
2,2,4-Trimethylpentane	0.73	Not Detected	3.4	Not Detected
Indene	0.73	Not Detected	3.5	Not Detected
Indan	0.73	Not Detected	3.5	Not Detected
Thiophene	0.73	Not Detected	2.5	Not Detected
2-Propanol	0.73	Not Detected	1.8	Not Detected

~~B = Compound present in laboratory blank greater than reporting limit, background subtraction not performed.~~

UJ = Non-detected compound associated with low bias in the CCV

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Acetaldehyde	75-07-0	86%	3.1 N J
Unknown	NA	NA	2.0 J
Tridecane	629-50-5	86%	5.7 N J
Unknown	NA	NA	3.9 J
Cyclohexane, isothiocyanato-	1122-82-3	53%	1.9 N J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRAMBUP(07)

Lab ID#: 0703524A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	g040228	Date of Collection	3/20/07
Dil. Factor	1.46	Date of Analysis	4/3/07 08:13 AM

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	103	70-130
Toluene-d8	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: GRAMBUP(07)

Lab ID#: 0703524A-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name	6040315	Date of Collection	3/20/07
File Factor	1.46	Date of Analysis	4/3/07 11:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.15	0.17	0.47	0.54

Container Type: 6 Liter Summa Special (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	112	70-130

Appendix C

NYSDEC Category B Laboratory Deliverable Package (CD-ROM)



Appendix D

DUSR

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Data Usability Summary Report

DATE: April 16, 2007

TO: Mr. James Edwards
The RETEC Group, Inc. - Merged with ENSR in 2007
1001 West Seneca Street, Suite 204
Ithaca, NY 14850

FROM: Gregory A. Malzone
Data Validator

SUBJECT: Orange and Rockland
O & R/Port Jervis 28 Pike Street
March 20, 2007 Air Sampling Event

Data Validation: Air Toxics LTD Work Orders:
0703524A and 0703524B

Overview

Air Toxics LTD. (ATL) work orders 0703524A and 0703524B contained two (2) soil gas, three (3) indoor air, and one (1) ambient air samples collected during the March 20, 2007 air sampling event at the O & R/Port Jervis 28 Pike Street site. A sample submittal summary is attached in Appendix A of this report.

Air Toxics LTD., 180 Blue Ravine Road, Suite B, Folsom, CA 95630 analyzed the samples for Volatile Organic Compounds (VOCs) using USEPA Compendium Method TO-15. Benzene was determined using GC/MS in the Selected Ion Monitoring (SIM) mode because a problem was encountered with ATL's low-level instrument establishing a curve for benzene. The helium analyses for the soil gas samples were performed using modified ASTM method D1945.

Summary

Data quality for this organic analysis was evaluated by reviewing the following parameters: holding times, GC/MS tuning and performance, internal standards, initial and continuing calibrations, continuing calibration verifications, surrogate recoveries, laboratory control standards (LCSs), laboratory blanks, laboratory duplicates, compound identification, and compound quantitation.

The Form 1s attached as Appendix A were revised to include the data validation qualifiers. All USEPA-defined data qualifiers and changes made by the data evaluators were added in red ink. A glossary of data qualifier definitions is included as Attachment 1. All samples were analyzed successfully and the results are useable with some qualification. Completeness of 100% was achieved for this data set.

Each specific issue of concern with respect to data usability is addressed below. Support documentation for data qualifications was included in Appendix B. Specific page references were provided in each item header for the supporting documentation.

Volatile Organic Compounds

- a. Chain-of-Custody (COC) Issues – Canister ID (pp. 0881): The canister ID numbers for samples GRIA6(07) and GRSG5(07) were incorrectly recorded on the chain-of-custody record. The ID numbers were corrected on the COC and in the raw data records.
- b. Blank Contamination (pp. 0366-0367): Chloromethane and bromomethane were detected in the method blank (0703524-07A) at 0.10 ppbv and 0.21 ppbv, respectively. All samples were affected. All positive bromomethane results were less than five times the blank level. The "B" qualifiers appended to the bromomethane results by ATL were changed to "U" qualifiers, as undetected, because of laboratory contamination. Chloromethane results that were less than five times the blank level were also qualified "U," as undetected, because of laboratory contamination. The chloromethane results for samples GRIA5(07) and GRIA50(07) were greater than five times the blank level, taking into account the dilutions. The chloromethane results for samples GRIA5(07) and GRIA50(07) were qualified "J," as estimated concentrations, because of high bias due to laboratory contamination.
- c. Calibrations (pp. 0389-0399, 0715-0716, 0717-0718): The March 20, 2007 initial calibration relative standard deviations (RSDs) for chloroethane and methylene chloride were greater than the 30% specification limit on instrument msd.g. All samples were affected. All results reported for chloroethane were nondetect. Validation action was not required in response to the calibration nonconformance. The positive methylene chloride results for samples GRIA5(07) and GRIA50(07)

Merged with ENSR in 2007

were qualified "J," as estimated concentrations, because of the calibration nonconformance. The direction of bias cannot be determined.

The continuing calibration verification (CCV) percent difference (%D) for 1,2,4-trichlorobenzene was less than the lower quality control limit of -30% on April 2, 2007 at 10:15 hrs. on instrument msd.g. In addition, the percent recovery for the CCV was less than the lower quality control limit for 1,2,4-trichlorobenzene. All samples were affected. All 1,2,4-trichlorobenzene results were nondetect and were qualified "UJ," as estimates, because of low instrument bias.

- d. Laboratory Control Sample Recoveries (pp. 0748-0751): The LCS (0703524A-09A) recoveries for chloroethane and 1, 2, 4-trichlorobenzene were less than the lower quality control limit of 70%, but greater than 30%. All samples were affected. All results for chloroethane and 1, 2, 4-trichlorobenzene were nondetect and were qualified "UJ," as estimates, because the low method bias.
- e. Calibration Range Exceeded (pp. Form Is): The following samples had analyte concentrations that exceeded the calibration range: GRIA6(07) – ethanol, GRIA5(07) – ethanol, GRIA50(07) – ethanol, and GRSG6(07) – ethanol. The "E" qualifiers appended to the results by ATL were changed to "J" qualifiers, as estimated concentrations. The direction of bias cannot be determined.

Helium Analysis

No data quality issues were noted. No data qualifications were required.

Field Duplicates

Field Duplicate Precision (pp.0096-0098, 0135, 0160-0162, 0198): Samples GRIA5(07) and GRIA50(07) were the primary and field duplicate samples collected for this sampling event. No data qualifications are required based on the relative percent difference (RPD) of field duplicate sample data alone. However, the positive results are presented in the table below to evaluate precision and sample homogeneity. All RPDs were less than 25%. Overall, laboratory and field precision were acceptable.

The difference between the primary and field duplicate results for chloroform for samples GRIA5(07) and GRIA50(07) was greater than the reporting limit. The chloroform results for samples GRIA5(07) and GRIA50(07) were qualified "J/UJ," as estimates, because of poor field sampling and/or laboratory precision and/or sample heterogeneity, based on professional judgment.

**Field Duplicate Comparison
28 Pike Street Property**

Analyte	GRIA5(07) (ppbv)	GRIA50(07) (ppbv)	%RPD	Qualifications
Freon 12	0.57	0.55	4	None
Chloromethane	0.92 J	0.90 J	2	None
Freon 11	0.43	0.44	2	None
Methylene Chloride	0.18 J	0.17 J	6	None
Benzene	1.9	1.8	5	None
Chloroform	0.19 J	0.16 UJ	NC	J/J
Toluene	1.6	1.7	6	None

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Field Duplicate Comparison (Continued)
28 Pike Street Property

Analyte	GRIA5(07) (ppbv)	GRIA50(07) (ppbv)	%RPD	Qualifications
Ethylbenzene	0.97	0.82	17	None
m,p-Xylene	4.7	4.4	7	None
o-Xylene	2.3	2.1	9	None
Acetone	6.2	6.6	6	None
Hexane	4.1	4.4	7	None
Cyclohexane	1.3	1.4	7	None
Ethanol	270 J	260 J	4	None
Heptane	1.4	1.5	7	None
2-Methylpentane	4.5	4.9	9	None
Isopentane	26	27	4	None

Notes

The laboratory indicated that no second source (i.e., independently traceable) standard was commercially available for propylene, 2-methylpentane, isopentane, 2,3-dimethylpentane, 2,2,4-trimethylpentane, indene, indan, and thiophene. These analytes were not spiked into the LCS sample.

Tentatively Identified Compounds (TICs) were identified by the laboratory and are included on the Form 1s.

The data were reviewed according to *USEPA Compendium Method TO-15, Determination of VOCs in Air Collected in Specially Prepared-Canisters and Analyzed by Gas Chromatography / Mass Spectrometry (GC/MS)*, January 1999, and with reference to *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999, document number EPA 540/R-99/008.

Attachments

Glossary of USEPA-defined data qualifier codes.

Appendices

- 1.0 Appendix A – Data Summary
- 2.0 Appendix B – Support Documentation

Attachment 1

Glossary of Data Qualifier Codes

Glossary of Data Qualifier Codes

- U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- R The data are unusable. The sample results are rejected due to serious deficiencies in the ability to meet quality control criteria. The presence or absence of the analyte cannot be verified.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
- NJ The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.
- J The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be inaccurate or imprecise.

Appendix A

Data Summary Tables

Appendix B

Support Documentation





AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0703524A

Work Order Summary

CLIENT: Mr. Jesse Lloyd
The RETEC Group, Inc.
1001 W. Seneca St.
Suite 204
Ithaca, NY 14850

PHONE: 607-277-5716

FAX:

DATE RECEIVED: 03/22/2007

DATE COMPLETED: 04/04/2007

BILL TO: Mr. Scott Hauswirth
The RETEC Group, Inc.
1001 W. Seneca St.
Suite 204
Ithaca, NY 14850

P.O. #

PROJECT # ORAN2 28 PIKE STREET

CONTACT: Kelly Buettner

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	GRIA6(07)	Modified TO-15	3.5 "Hg
01B	GRIA6(07)	Modified TO-15	3.5 "Hg
01BB	GRIA6(07) Duplicate	Modified TO-15	3.5 "Hg
02A	GRIA5(07)	Modified TO-15	5.0 "Hg
02B	GRIA5(07)	Modified TO-15	5.0 "Hg
03A	GRIA50(07)	Modified TO-15	4.0 "Hg
03B	GRIA50(07)	Modified TO-15	4.0 "Hg
04A	GRSG5(07)	Modified TO-15	4.5 "Hg
04B	GRSG5(07)	Modified TO-15	4.5 "Hg
05A	GRSG6(07)	Modified TO-15	4.0 "Hg
05B	GRSG6(07)	Modified TO-15	4.0 "Hg
06A	GRAMBUP(07)	Modified TO-15	2.5 "Hg
06B	GRAMBUP(07)	Modified TO-15	2.5 "Hg
07A	Lab Blank	Modified TO-15	NA
07B	Lab Blank	Modified TO-15	NA
08A	CCV	Modified TO-15	NA
08B	CCV	Modified TO-15	NA

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0703524A

Work Order Summary

CLIENT:	Mr. Jesse Lloyd The RETEC Group, Inc. 1001 W. Seneca St. Suite 204 Ithaca, NY 14850	BILL TO:	Mr. Scott Hauswirth The RETEC Group, Inc. 1001 W. Seneca St. Suite 204 Ithaca, NY 14850
PHONE:	607-277-5716	P.O. #	
FAX:		PROJECT #	ORAN2 28 PIKE STREET
DATE RECEIVED:	03/22/2007	CONTACT:	Kelly Buettner
DATE COMPLETED:	04/04/2007		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
09A	LCS	Modified TO-15	NA
09B	LCS	Modified TO-15	NA

CERTIFIED BY: *Sandra D. Freeman*

Laboratory Director

DATE: 04/06/07

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
The RETEC Group, Inc.
Workorder# 0703524A

Six 6 Liter Summa Special (100% Certified) samples were received on March 22, 2007. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 1.0 liter of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	+/- 30% RSD with 2 compounds allowed out to < 40% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily Calibration	+/- 30% Difference	<= 30% Difference with four allowed out up to <=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

The Chain of Custody (COC) information for sample GRIA5(07) did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

The results for each sample in this report were acquired from two separate data files.

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the

bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Sample Discrepancy Report

If Section III or IV is filled out CSR must be notified within 24 hrs of initiation

Initiated By: MO

Date: 3/22/07

Given To: _____

File to folder

Sections I - II/III/IV must be filled out by person initiating this Sample Discrepancy Report

I. Workorder(s) affected: 0703524

Sample(s) affected: 02A

II. Sample Receipt Discrepancies (Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative)

- | | |
|---|---|
| <input type="checkbox"/> COC improperly relinquished / received. | <input type="checkbox"/> Flow controller used - canister samples received at ambient or under pressure. |
| <input type="checkbox"/> COC was not filled out in ink. | <input type="checkbox"/> No brass cap on canister (<i>do not narrate</i>). |
| <input type="checkbox"/> Sample tags / labels do not match the COC. | <input type="checkbox"/> VOA vial for RSK-175 analysis received with headspace bubble <5mm (<i>do not narrate</i>). |
| <input type="checkbox"/> Samples received at wrong temperature ($\neq 4\pm 2$ °C); ice / blue ice (circle one) was present. A temp. blank was / was <i>not</i> present (circle one). | <input checked="" type="checkbox"/> Other (describe below). |
| <input type="checkbox"/> Sample container (Tube/VOA vial) was received broken, <u>however</u> sample was intact. | |

Describe the Discrepancy: Can # incorrect (should be 9583)

Initials: _____ Date: _____

III. Sample Receipt Discrepancies requiring CSR notification (document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative)

- | | |
|---|--|
| <input type="checkbox"/> COC was not received with samples. | <input type="checkbox"/> Canister leaked to ambient during pressurization. |
| <input type="checkbox"/> Analysis method(s) is not specified / incorrectly specified (circle one) on the COC. | <input type="checkbox"/> Tedlar bag / canister received emitting a strong odor; sample can / cannot (circle one) be analyzed. |
| <input type="checkbox"/> Number of samples on the COC does not match the number of samples that were received. | <input type="checkbox"/> Canister sample received with a vacuum difference >7.0"Hg between the receipt vac. and the final vac. reported on the COC, indicating loss of vacuum. |
| <input type="checkbox"/> Samples were received expired. | <input type="checkbox"/> Canister sample received at >15"Hg (<u>not</u> identified as a Trip/Field Blank). |
| <input type="checkbox"/> Sampling date / time is not documented for <u>some</u> / <u>any</u> samples (circle one). | <input type="checkbox"/> Trip Blank received at low vacuum (< 25"Hg). |
| <input type="checkbox"/> Sample received with discernable volume of H ₂ O in the Tedlar Bag. | <input type="checkbox"/> Tedlar Bag for Sulfur analysis has metal fitting. |
| <input type="checkbox"/> Sample container (Tube/VOA vial/DNPH Bottle, etc.) was received broken / leaking (circle one). | <input type="checkbox"/> Incorrect sampling media / container for analysis requested. |
| <input type="checkbox"/> VOA vial for RSK-175 analysis received with headspace bubble >5mm. | <input type="checkbox"/> Custody Seal on the outside of the container was broken / improperly placed (circle one). |
| <input type="checkbox"/> Samples for RSK-175 CO ₂ analysis received preserved with HCl. | <input type="checkbox"/> Other (describe below). |
| <input type="checkbox"/> Tedlar Bag received leaking / flat (circle one). Sample can / cannot (circle one) be analyzed. | |

Describe the Discrepancy: _____

Initials: _____ Date: _____



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0703524A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	G040206a	Date of Collection:	NA
Dil Factor:	1.00	Date of Analysis:	4/2/07 12:33 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.10	0.10	0.21	0.21
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
Bromomethane	0.10	0.21	0.39	0.81
Chloroethane	0.10	Not Detected	0.26	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
Methylene Chloride	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected U J	3.7	Not Detected U J
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected
Propylene	0.50	Not Detected	0.86	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0703524A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 0703524A-07A	Date of Collection: NA
Dir. Factor: 1.00	Date of Analysis: 4/2/07 12:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
1,4-Dioxane	0.50	Not Detected	1.8	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Naphthalene	0.50	Not Detected	2.6	Not Detected
2-Methylpentane	0.50	Not Detected	1.8	Not Detected
Isopentane	0.50	Not Detected	1.5	Not Detected
2,3-Dimethylpentane	0.50	Not Detected	2.0	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Indene	0.50	Not Detected	2.4	Not Detected
Indan	0.50	Not Detected	2.4	Not Detected
Thiophene	0.50	Not Detected	1.7	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
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None Identified

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0703524A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	g040206a	Date of Collection	NA
DI. Factor	1.00	Date of Analysis	4/2/07 12:33 PM

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	98	70-130
Toluene-d8	95	70-130

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 21-FEB-2007 14:04
 End Cal Date : 20-MAR-2007 18:54
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Calibration File Names:
 Level 5: /chem/msdg.i/20Mar2007.b/g032007.d
 Level 6: /chem/msdg.i/20Mar2007.b/g032008.d
 Level 7: /chem/msdg.i/20Mar2007.b/g032009.d
 Level 8: /chem/msdg.i/20Mar2007.b/g032010.d
 Level 9: /chem/msdg.i/21Feb2007.b/g022119a.d
 Level 10: /chem/msdg.i/20Mar2007.b/g032013.d
 Level 12: /chem/msdg.i/20Mar2007.b/g032004.d

Compound	0.10000	0.50000	2.000	10.000	20.000	40.000	RRF	% RSD
	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10		
176 Methyl Acetate	+++++	5.34857	6.99627	7.32996	+++++	8.33842	6.97703	15.439
177 1,2-Dibromo-3-Chloroprene	+++++	0.32269	0.36240	0.45082	+++++	0.56545	0.42259	22.114
178 1,2,3-Trichlorobenzene	+++++	0.88776	0.91876	1.09383	+++++	1.33443	1.03709	17.740
2 Methylcyclohexane	+++++	2.64097	2.71644	2.83323	2.74809	2.94082	2.77591	4.147
3 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Propylene	+++++	1.28043	1.24997	1.35390	1.26870	1.29917	1.29043	3.079
5 Freon 152A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Air Toxics Ltd.

INITIAL CALIBRATION DATA

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 Integrator : HP RTE
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 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
6 Dichlorodifluoromethane/Fr12	3.41360 ++++	3.08312	3.31460	3.26494	3.11517	3.14514	3.22276	4.015
7 Freon 114	2.38608 ++++	2.30846	2.43915	2.45194	2.33896	2.42950	2.39235	2.441
8 Chloromethane	2.21188 ++++	1.74300	1.63597	1.48883	1.38103	1.45518	1.65265	18.369
9 Vinyl Chloride	1.62018 ++++	1.53617	1.65513	1.70658	1.62844	1.70237	1.64148	3.838
10 1,3-Butadiene	1.96633 ++++	1.18639	1.28008	1.24548	1.18673	1.22956	1.34910	22.571
11 Bromomethane	1.01209 ++++	0.91467	0.92697	1.16334	1.16477	1.20237	1.06403	12.104
12 Freon 22	++++	++++	++++	++++	++++	++++	++++	++++
13 Chloroethane	1.06062 ++++	0.88905	0.71539	0.49664	0.48835	0.43723	0.68121	37.085<-
174 2,4-Dimethylpentane	++++ 3.65329	2.84153	3.60860	3.99540	++++	4.28355	3.67647	14.726
14 Isopentane	++++	1.26662	1.27728	1.47356	1.12689	0.82016	1.19290	20.302

Air Toxics Ltd.

INITIAL CALIBRATION DATA

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 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
15 Vinyl Bromide	+++++ 0.89974	0.93426	0.91106	0.91351	+++++ 0.91190	0.91190	0.91409	1.370
16 Trichlorofluoromethane/Fr11	+++++ 2.70170	2.72423	2.79153	2.86556	2.76419	2.71475	2.76033	2.226
17 Ethanol	+++++ +++++	0.48246	0.55634	0.48760	0.45135	0.45996	0.48754	8.475
18 1,1-Dichloroethene	+++++ 0.89253	0.80169	0.72409	0.82178	0.80282	0.70051	0.79057	8.795
19 Freon 113	+++++ 1.76481	1.88062	1.66017	1.95034	1.85842	1.66027	1.79577	6.716
20 Carbon Disulfide	+++++ +++++	4.68689	3.67316	4.33266	4.35224	3.55338	4.11967	11.775
21 Acetone	+++++ +++++	3.11208	2.60100	2.61415	2.47440	2.16591	2.59351	13.167
22 Acrolein	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
23 Pentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 2-Propanol	+++++ +++++	2.57415	2.25102	2.57909	2.69384	2.17761	2.45514	9.225

Air Toxics Ltd.

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 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
25 3-Chloroprene	+++++	0.61746	0.42499	0.68477	0.69464	0.43513	0.57140	23.179
26 2-Methylpentane	+++++	0.83036	1.14770	1.26979	+++++	1.41585	1.17148	18.447
27 Acetonitrile	+++++	2.31082	3.04035	3.06044	+++++	3.44123	2.95313	13.875
28 Methylene Chloride	1.59961	1.28653	0.67149	1.16778	1.17487	0.76613	1.11107	30.890<-
29 MTBE	3.34739	3.31004	2.48250	3.71522	3.43283	3.62029	3.31805	13.215
30 trans-1,2-Dichloroethene	0.87067	0.88905	0.50539	0.96450	0.88809	0.90636	0.83734	19.804
31 Acrylonitrile	+++++	1.56693	1.27144	1.38443	+++++	1.64330	1.42632	12.065
32 Hexane	3.35960	2.77603	2.93339	3.02515	2.88771	3.08570	3.01126	6.703
33 1,1-Dichloroethane	2.88329	2.77135	2.78830	3.01854	2.96530	3.08626	2.91884	4.339
34 Chloroprene	+++++	2.70013	2.96986	3.19081	3.11636	3.42335	3.08010	8.710

Air Toxics Ltd.

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 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
35 Vinyl Acetate	+++++	4.20154	4.75108	5.01958	4.88731	5.15472	4.80284	7.666
36 cis-1,2-Dichloroethene	+++++	0.86296	0.88392	0.84368	0.89910	0.87292	0.87863	2.731
37 2-Butanone	+++++	0.74790	0.63184	0.68067	0.72169	0.71655	0.70861	6.443
169 Ethyl Acetate	+++++	4.32122	4.61012	5.08383	+++++	5.40935	4.83772	8.717
38 Tetrahydrofuran	+++++	2.07307	2.17026	2.25153	2.13718	2.32474	2.19136	4.494
40 Chloroform	+++++	2.20770	2.23515	2.27373	2.44800	2.37313	2.33795	4.992
41 Cyclohexane	+++++	2.02161	1.79660	1.95652	2.03273	2.00000	1.98587	5.292
42 1,1,1-Trichloroethane	+++++	2.15403	1.96272	2.03905	2.19538	2.16096	2.13732	5.722
43 2,3-Dimethylpentane	+++++	0.19505	0.18910	0.22749	0.24108	+++++	0.22458	11.991
44 Carbon Tetrachloride	+++++	1.87345	1.80956	1.86446	2.05631	2.00307	1.95948	6.712

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 21-FEB-2007 14:04
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 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
45 2,2,4-Trimethylpentane	2.97392 +++++	2.68295	2.77361	3.02496	2.93674	3.11186	2.91734	5.497
46 Benzene	+++++	1.33309	1.10848	1.06453	1.08895	1.12035	1.14308	9.475
48 1,2-Dichloroethane	0.44144 +++++	0.43436	0.43251	0.45198	0.46366	0.46779	0.44862	3.336
49 Heptane	0.91011 +++++	0.80980	0.90963	0.92105	0.90092	0.96299	0.90242	5.587
50 Thiophene	+++++ 0.53491	0.51114	0.52408	0.54978	+++++	0.57936	0.53986	4.863
52 Trichloroethene	0.38396 +++++	0.39533	0.39632	0.40969	0.41320	0.43011	0.40477	4.031
53 1,2-Dichloropropane	0.44474 +++++	0.40752	0.45507	0.46352	0.46869	0.48578	0.45422	5.877
54 1,4-Dioxane	0.17836 +++++	0.18600	0.19506	0.18803	0.19873	0.20203	0.19137	4.620
55 Bromodichloromethane	0.52646 +++++	0.51345	0.54115	0.56488	0.58058	0.59890	0.55424	5.934
56 cis-1,3-Dichloropropene	0.45690 +++++	0.47860	0.51938	0.52986	0.53701	0.55340	0.51253	7.229

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 21-FEB-2007 14:04
 End Cal Date : 20-MAR-2007 18:54
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
57 Octane	+++++	0.36155	0.44661	0.48027	+++++	0.49289	0.44765	11.505
58 4-Methyl-2-pentanone	1.11363	0.96975	1.10875	1.07333	1.11336	1.13576	1.08577	5.554
60 Toluene	1.58984	1.18973	1.19063	1.17425	1.17279	1.20423	1.25358	13.174
61 trans-1,3-Dichloropropene	0.56855	0.59542	0.62723	0.65725	0.67948	0.69844	0.63773	7.839
62 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 1,1,2-Trichloroethane	0.42687	0.50356	0.48319	0.48453	0.49185	0.50471	0.48245	5.953
64 Tetrachloroethene	0.59820	0.61191	0.63358	0.63417	0.65854	0.68200	0.63640	4.788
65 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
66 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 2-Hexanone	+++++	0.62617	0.64383	0.61706	0.68000	0.71005	0.65542	5.933

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 21-FEB-2007 14:04
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 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000	0.50000	2.000	10.000	20.000	40.000	RRF	% RSD
	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10		
	5.000							
	Level 12							
68 Dibromochloromethane	0.58529	0.60102	0.63808	0.68699	0.73507	0.75777	0.66737	10.625
69 1,2-Dibromoethane	0.68291	0.67374	0.71079	0.70707	0.74046	0.73808	0.70884	3.872
70 p-Cymene	1.91266	1.31222	1.74795	2.04050	2.36823	1.87631	20.726	
71 Hexachloroethane	++++	++++	++++	++++	++++	++++	++++	++++
73 Chlorobenzene	1.08709	1.08902	1.12579	1.12528	1.15902	1.19134	1.12959	3.577
173 Nonane	1.85496	1.18458	1.63534	1.87762	1.99081	1.70866	18.728	
74 Ethyl Benzene	0.57692	0.58586	0.61040	0.61509	0.63917	0.66814	0.61593	5.493
168 1,1,1,2-Tetrachloroethane	++++	++++	++++	++++	++++	++++	++++	++++
75 m,p-Xylene	0.80614	0.73964	0.78488	0.77616	0.81241	0.85457	0.79563	4.866
76 1,3,5-Trichlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++

Air Toxics Ltd.

INITIAL CALIBRATION DATA

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 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	5.000 Level 12	RRF	% RSD
77 o-Xylene	0.64338	0.64014	0.69149	0.69094	0.73273	0.75406		0.69212	6.641
78 Styrene	0.99482	1.02983	1.13233	1.14843	1.19310	1.26661		1.12752	8.980
79 Bromoform	0.47164	0.46241	0.50479	0.56410	0.62688	0.67349		0.55055	15.670
170 alpha-Pinene	++++	0.76948	1.11236	1.26384	++++	1.45728		1.17035	21.838
80 Cumene	1.68700	1.74728	1.89980	1.88887	1.96758	2.06485		1.87590	7.428
82 1,1,2,2-Tetrachloroethane	0.80896	0.92810	0.97549	0.96104	1.01280	1.06714		0.95892	9.131
83 Propylbenzene	2.15340	2.11696	2.33749	2.23509	2.34593	2.40476		2.26561	5.094
84 4-Ethyltoluene	1.64556	1.77774	1.93569	1.87843	1.97908	2.09104		1.88459	8.314
172 2-Chlorotoluene	++++	0.34559	0.43176	0.47289	++++	0.54251		0.45211	15.877
85 1,3,5-Trimethylbenzene	1.47291	1.50216	1.56700	1.60012	1.69634	1.75223		1.59846	6.810

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 21-FEB-2007 14:04
 End Cal Date : 20-MAR-2007 18:54
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
175 Decane	+++++ 1.70093	1.12722	1.57242	1.76432	+++++ 1.63850	2.02760		20.171
86 tert-Butylbenzene	+++++ 1.55076	1.12067	1.49850	1.63589	+++++ 1.53986	1.89350		18.132
87 1,2,4-Trimethylbenzene	+++++ 1.56489	1.39436	1.45245	1.58731	1.57861	1.65810	1.71851	7.811
88 sec-Butylbenzene	+++++ 2.08133	1.50418	1.93841	2.19591	+++++ 2.05076	2.53396		18.357
89 1,3-Dichlorobenzene	+++++ 1.05147	0.94722	1.00674	1.07496	1.03371	1.09601	1.15019	6.787
90 1,4-Dichlorobenzene	+++++ 1.08007	1.01176	1.03613	1.08566	1.06376	1.11502	1.16809	5.215
171 1,2,3-Trimethylbenzene	+++++ 0.64428	0.44440	0.59468	0.66253	+++++ 0.62733	0.79076		19.968
91 alpha-chlorotoluene	+++++ 1.03546	0.81955	0.89327	1.00534	1.07372	1.18125	1.23964	15.701
92 Indan	+++++ 1.53125	1.09644	1.43411	1.60545	+++++ 1.51885	1.92699		19.747
93 Butylbenzene	+++++ 0.52227	0.36497	0.49965	0.55653	+++++ 0.52227	0.67086		21.087

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 21-FEB-2007 14:04
 End Cal Date : 20-MAR-2007 18:54
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msdg.i/20Mar2007.b/t141221d.m
 Cal Date : 21-Mar-2007 16:38 jgray
 Curve Type : Average

Compound	0.10000 Level 5	0.50000 Level 6	2.000 Level 7	10.000 Level 8	20.000 Level 9	40.000 Level 10	RRF	% RSD
94 1,2-Dichlorobenzene	0.76580 ++++	0.85729	0.94763	0.91924	0.97249	1.02720	0.91494	10.085
95 Indene	++++ 1.28932	0.87269	1.15862	1.39287	++++	1.66514	1.27573	22.911
96 1,2,4-Trichlorobenzene	++++	0.91854	1.07549	0.83765	0.94251	1.09309	0.97346	11.152
97 Hexachlorobutadiene	++++	0.47974	0.53587	0.46388	0.51153	0.60794	0.51979	10.894
98 Naphthalene	++++	2.57405	2.76453	2.92158	3.26508	3.61116	3.02728	13.651
\$ 47 1,2-Dichloroethane-d4	1.34928 ++++	1.39590	1.34194	1.42677	1.43407	1.51527	1.41054	4.535
\$ 59 Toluene-d8	0.99460 ++++	0.97818	1.00270	1.01166	0.99655	0.99332	0.99617	1.115
\$ 81 Bromofluorobenzene	0.48900 ++++	0.49921	0.51208	0.52723	0.52204	0.51220	0.51029	2.782



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0703524A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	040203	Date of Collection	INA
Dil. Factor	1.00	Date of Analysis	4/27/07 10:15 AM

Compound	%Recovery
Freon 12	92
Freon 114	102
Chloromethane	86
Vinyl Chloride	89
Bromomethane	88
Chloroethane	71
Freon 11	105
1,1-Dichloroethene	103
Freon 113	105
Methylene Chloride	110
1,1-Dichloroethane	113
cis-1,2-Dichloroethene	106
Chloroform	115
1,1,1-Trichloroethane	108
Carbon Tetrachloride	114
1,2-Dichloroethane	104
Trichloroethene	102
1,2-Dichloropropane	108
cis-1,3-Dichloropropene	97
Toluene	95
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	109
Tetrachloroethene	111
1,2-Dibromoethane (EDB)	108
Chlorobenzene	108
Ethyl Benzene	104
m,p-Xylene	98
o-Xylene	101
Styrene	102
1,1,1,2-Tetrachloroethane	109
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	91
1,3-Dichlorobenzene	91
1,4-Dichlorobenzene	91
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	93
1,2,4-Trichlorobenzene	65 Q
Hexachlorobutadiene	90
Propylene	86



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0703524A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	07040203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/2/07 10:15 AM

Compound	%Recovery
1,3-Butadiene	77
Acetone	104
Carbon Disulfide	104
trans-1,2-Dichloroethene	121
2-Butanone (Methyl Ethyl Ketone)	112
Hexane	107
Tetrahydrofuran	111
Cyclohexane	107
1,4-Dioxane	76
Bromodichloromethane	107
4-Methyl-2-pentanone	103
2-Hexanone	105
Dibromochloromethane	113
Bromoform	110
4-Ethyltoluene	104
Ethanol	90
Methyl tert-butyl ether	101
Heptane	108
Naphthalene	119
2-Methylpentane	99
Isopentane	89
2,3-Dimethylpentane	102
2,2,4-Trimethylpentane	119
Indene	97
Indan	96
Thiophene	103
2-Propanol	100

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	106	70-130
Toluene-d8	100	70-130

Air Toxics Ltd.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msdg.i Injection Date: 02-APR-2007 10:15
Lab File ID: g040203.d Init. Cal. Date(s): 21-FEB-2007 20-MAR-2007
Analysis Type: AIR Init. Cal. Times: 14:04 18:54
Lab Sample ID: CCV-1 Quant Type: ISTD
Method: /chem/msdg.i/02Apr2007.b/t141221d.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
47 1,2-Dichloroethane-d4	1.41054	1.52990	0.010	-8.46212	30.00000	Averaged
59 Toluene-d8	0.99617	0.99307	0.010	0.31112	30.00000	Averaged
81 Bromofluorobenzene	0.51029	0.53957	0.010	-5.73772	30.00000	Averaged
4 Propylene	1.29043	1.10943	0.010	14.02646	30.00000	Averaged
6 Dichlorodifluoromethane/Fr1	3.22276	2.94941	0.010	8.48197	30.00000	Averaged
7 Freon 114	2.39235	2.45002	0.010	-2.41077	30.00000	Averaged
8 Chloromethane	1.65265	1.42062	0.010	14.03968	30.00000	Averaged
9 Vinyl Chloride	1.64148	1.45659	0.010	11.26335	30.00000	Averaged
10 1,3-Butadiene	1.34910	1.03708	0.010	23.12783	30.00000	Averaged
11 Bromomethane	1.06403	0.93192	0.010	12.41680	30.00000	Averaged
13 Chloroethane	0.68121	0.48505	0.010	28.79605	30.00000	Averaged
16 Trichlorofluoromethane/Fr11	2.76033	2.89370	0.010	-4.83190	30.00000	Averaged
17 Ethanol	0.48754	0.43782	0.010	10.19855	30.00000	Averaged
19 Freon 113	1.79577	1.88610	0.010	-5.03021	30.00000	Averaged
18 1,1-Dichloroethene	0.79057	0.81740	0.010	-3.39327	30.00000	Averaged
21 Acetone	2.59351	2.69854	0.010	-4.04986	30.00000	Averaged
24 2-Propanol	2.45514	2.45528	0.010	-0.00576	30.00000	Averaged
20 Carbon Disulfide	4.11967	4.27472	0.010	-3.76372	30.00000	Averaged
25 3-Chloroprene	0.57140	0.66635	0.010	-16.61760	30.00000	Averaged
28 Methylene Chloride	1.11107	1.22438	0.010	-10.19847	30.00000	Averaged
29 MTBE	3.31805	3.34490	0.010	-0.80921	30.00000	Averaged
30 trans-1,2-Dichloroethene	0.83734	1.01053	0.010	-20.68273	30.00000	Averaged
32 Hexane	3.01126	3.21536	0.010	-6.77780	30.00000	Averaged
33 1,1-Dichloroethane	2.91884	3.30173	0.010	-13.11792	30.00000	Averaged
35 Vinyl Acetate	4.80284	5.14929	0.010	-7.21328	30.00000	Averaged
37 2-Butanone	0.70861	0.79100	0.010	-11.62825	30.00000	Averaged
36 cis-1,2-Dichloroethene	0.87863	0.93041	0.010	-5.89351	30.00000	Averaged
38 Tetrahydrofuran	2.19136	2.43678	0.010	-11.19955	30.00000	Averaged
40 Chloroform	2.33795	2.68574	0.010	-14.87602	30.00000	Averaged
42 1,1,1-Trichloroethane	2.13732	2.30487	0.010	-7.83953	30.00000	Averaged
41 Cyclohexane	1.98587	2.12501	0.010	-7.00667	30.00000	Averaged
44 Carbon Tetrachloride	1.95948	2.23512	0.010	-14.06706	30.00000	Averaged
45 2,2,4-Trimethylpentane	2.91734	3.48174	0.010	-19.34623	30.00000	Averaged
46 Benzene	1.14308	1.13440	0.010	0.75932	30.00000	Averaged
48 1,2-Dichloroethane	0.44862	0.46492	0.010	-3.63269	30.00000	Averaged

Air Toxics Ltd.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msdg.i Injection Date: 02-APR-2007 10:15
 Lab File ID: g040203.d Init. Cal. Date(s): 21-FEB-2007 20-MAR-2007
 Analysis Type: AIR Init. Cal. Times: 14:04 18:54
 Lab Sample ID: CCV-1 Quant Type: ISTD
 Method: /chem/msdg.i/02Apr2007.b/t141221d.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX RRF	%D / %DRIFT	CURVE TYPE
49 Heptane	0.90242	0.97496	0.010	-8.03902	30.00000		Averaged
52 Trichloroethene	0.40477	0.41165	0.010	-1.69932	30.00000		Averaged
53 1,2-Dichloropropane	0.45422	0.49140	0.010	-8.18494	30.00000		Averaged
54 1,4-Dioxane	0.19137	0.14600	0.010	23.70703	30.00000		Averaged
55 Bromodichloromethane	0.55424	0.59468	0.010	-7.29671	30.00000		Averaged
56 cis-1,3-Dichloropropene	0.51253	0.49719	0.010	2.99278	30.00000		Averaged
58 4-Methyl-2-pentanone	1.08577	1.11604	0.010	-2.78802	30.00000		Averaged
60 Toluene	1.25358	1.18648	0.010	5.35253	30.00000		Averaged
61 trans-1,3-Dichloropropene	0.63773	0.67511	0.010	-5.86187	30.00000		Averaged
63 1,1,2-Trichloroethane	0.48245	0.52703	0.010	-9.24044	30.00000		Averaged
64 Tetrachloroethene	0.63640	0.70567	0.010	-10.88430	30.00000		Averaged
67 2-Hexanone	0.65542	0.68999	0.010	-5.27297	30.00000		Averaged
68 Dibromochloromethane	0.66737	0.75515	0.010	-13.15324	30.00000		Averaged
69 1,2-Dibromoethane	0.70884	0.76470	0.010	-7.87970	30.00000		Averaged
73 Chlorobenzene	1.12959	1.21541	0.010	-7.59721	30.00000		Averaged
74 Ethyl Benzene	0.61593	0.63898	0.010	-3.74303	30.00000		Averaged
75 m,p-Xylene	0.79563	0.78229	0.010	1.67757	30.00000		Averaged
77 o-Xylene	0.69212	0.69681	0.010	-0.67706	30.00000		Averaged
78 Styrene	1.12752	1.15195	0.010	-2.16701	30.00000		Averaged
79 Bromoform	0.55055	0.60845	0.010	-10.51626	30.00000		Averaged
80 Cumene	1.87590	1.89802	0.010	-1.17933	30.00000		Averaged
82 1,1,2,2-Tetrachloroethane	0.95892	1.04265	0.010	-8.73187	30.00000		Averaged
83 Propylbenzene	2.26561	2.39874	0.010	-5.87633	30.00000		Averaged
84 4-Ethyltoluene	1.88459	1.96831	0.010	-4.44244	30.00000		Averaged
85 1,3,5-Trimethylbenzene	1.59846	1.56323	0.010	2.20384	30.00000		Averaged
87 1,2,4-Trimethylbenzene	1.56489	1.41993	0.010	9.26292	30.00000		Averaged
89 1,3-Dichlorobenzene	1.05147	0.95995	0.010	8.70451	30.00000		Averaged
90 1,4-Dichlorobenzene	1.08007	0.97989	0.010	9.27530	30.00000		Averaged
91 alpha-chlorotoluene	1.03546	1.14484	0.010	-10.56297	30.00000		Averaged
94 1,2-Dichlorobenzene	0.91494	0.85305	0.010	6.76397	30.00000		Averaged
96 1,2,4-Trichlorobenzene	0.97346	0.63731	0.010	34.53101	30.00000		Averaged <-
97 Hexachlorobutadiene	0.51979	0.46868	0.010	9.83266	30.00000		Averaged
98 Naphthalene	3.02728	3.61020	0.010	-19.25575	30.00000		Averaged
14 Isopentane	1.19290	1.06222	0.010	10.95506	30.00000		Averaged



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0703524A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	g040205	Date of Collection:	NA
DJI Factor:	1.00	Date of Analysis:	4/2/07 11:40 AM

Compound	%Recovery
Freon 12	80
Freon 114	94
Chloromethane	75
Vinyl Chloride	79
Bromomethane	87
Chloroethane	64 Q
Freon 11	95
1,1-Dichloroethene	111
Freon 113	112
Methylene Chloride	116
1,1-Dichloroethane	112
cis-1,2-Dichloroethene	107
Chloroform	111
1,1,1-Trichloroethane	104
Carbon Tetrachloride	109
1,2-Dichloroethane	107
Trichloroethene	109
1,2-Dichloropropane	115
cis-1,3-Dichloropropene	103
Toluene	104
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	113
Tetrachloroethene	112
1,2-Dibromoethane (EDB)	108
Chlorobenzene	111
Ethyl Benzene	108
m,p-Xylene	103
o-Xylene	106
Styrene	106
1,1,2,2-Tetrachloroethane	120
1,3,5-Trimethylbenzene	106
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	102
alpha-Chlorotoluene	119
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	69 Q
Hexachlorobutadiene	96
Propylene	Not Spiked



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0703524A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	g070205	Date of Collection	NA
Dil. Factor	1.00	Date of Analysis	4/2/07 11:40AM

Compound	%Recovery
1,3-Butadiene	70
Acetone	116
Carbon Disulfide	99
trans-1,2-Dichloroethene	113
2-Butanone (Methyl Ethyl Ketone)	111
Hexane	103
Tetrahydrofuran	117
Cyclohexane	103
1,4-Dioxane	127
Bromodichloromethane	112
4-Methyl-2-pentanone	108
2-Hexanone	113
Dibromochloromethane	114
Bromoform	121
4-Ethyltoluene	118
Ethanol	88
Methyl tert-butyl ether	93
Heptane	111
Naphthalene	74
2-Methylpentane	Not Spiked
Isopentane	Not Spiked
2,3-Dimethylpentane	Not Spiked
2,2,4-Trimethylpentane	Not Spiked
Indene	Not Spiked
Indan	Not Spiked
Thiophene	Not Spiked
2-Propanol	107

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	105	70-130
Toluene-d8	100	70-130

Air Toxics Ltd.

RECOVERY REPORT

Client Name: Client SDG: 02Apr2007
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: LCS-1 Client Smp ID: LCS-1
Level: LOW Operator: ea
Data Type: MS DATA SampleType: LCS
SpikeList File: Spectra.spk Quant Type: ISTD
Sublist File: AT06p4.sub
Method File: /chem/msdg.i/02Apr2007.b/t141221d.m
Misc Info: 50ppbv-10ppbv

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
6 Dichlorodifluorome	10.000	7.995	79.95	70-130
7 Freon 114	10.000	9.401	94.01	70-130
8 Chloromethane	10.000	7.544	75.44	70-130
9 Vinyl Chloride	10.000	7.921	79.21	70-130
10 1,3-Butadiene	10.000	7.001	70.01	60-140
11 Bromomethane	10.000	8.696	86.96	70-130
13 Chloroethane	10.000	6.396	63.96*	70-130
16 Trichlorofluoromet	10.000	9.503	95.03	70-130
17 Ethanol	10.000	8.821	88.21	70-130
19 Freon 113	10.000	11.252	112.52	70-130
18 1,1-Dichloroethene	10.000	11.143	111.43	70-130
21 Acetone	10.000	11.619	116.19	70-130
20 Carbon Disulfide	10.000	9.889	98.89	70-130
24 2-Propanol	10.000	10.711	107.11	60-140
28 Methylene Chloride	10.000	11.597	115.97	70-130
29 MTBE	10.000	9.315	93.15	70-130
30 trans-1,2-Dichloro	10.000	11.291	112.91	70-130
32 Hexane	10.000	10.286	102.86	70-130
33 1,1-Dichloroethane	10.000	11.157	111.57	70-130
36 cis-1,2-Dichloroet	10.000	10.706	107.06	70-130
37 2-Butanone	10.000	11.127	111.27	70-130
38 Tetrahydrofuran	10.000	11.696	116.96	70-130
40 Chloroform	10.000	11.072	110.72	70-130
41 Cyclohexane	10.000	10.298	102.98	70-130
42 1,1,1-Trichloroeth	10.000	10.429	104.29	70-130
44 Carbon Tetrachlori	10.000	10.860	108.60	70-130
46 Benzene	10.000	10.377	103.77	70-130
49 Heptane	10.000	11.083	110.83	70-130
48 1,2-Dichloroethane	10.000	10.745	107.45	70-130
52 Trichloroethene	10.000	10.933	109.33	70-130
53 1,2-Dichloropropan	10.000	11.504	115.04	70-130
54 1,4-Dioxane	10.000	12.727	127.27	70-130
55 Bromodichlorometha	10.000	11.153	111.53	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
56 cis-1,3-Dichloropr	10.000	10.331	103.31	70-130
58 4-Methyl-2-pentano	10.000	10.832	108.32	70-130
60 Toluene	10.000	10.458	104.58	70-130
61 trans-1,3-Dichloro	10.000	10.510	105.10	70-130
63 1,1,2-Trichloroeth	10.000	11.272	112.72	70-130
67 2-Hexanone	10.000	11.282	112.82	70-130
64 Tetrachloroethene	10.000	11.153	111.53	70-130
68 Dibromochlorometha	10.000	11.455	114.55	70-130
69 1,2-Dibromoethane	10.000	10.842	108.42	70-130
73 Chlorobenzene	10.000	11.072	110.72	70-130
74 Ethyl Benzene	10.000	10.762	107.62	70-130
75 m,p-Xylene	10.000	10.267	102.67	70-130
77 o-Xylene	10.000	10.602	106.02	70-130
78 Styrene	10.000	10.561	105.61	70-130
79 Bromoform	10.000	12.089	120.89	70-130
80 Cumene	10.000	11.356	113.56	70-130
82 1,1,2,2-Tetrachlor	10.000	11.950	119.50	70-130
83 Propylbenzene	10.000	11.841	118.41	70-130
84 4-Ethyltoluene	10.000	11.764	117.64	70-130
85 1,3,5-Trimethylben	10.000	10.596	105.96	70-130
87 1,2,4-Trimethylben	10.000	10.286	102.87	70-130
89 1,3-Dichlorobenzen	10.000	10.399	103.99	70-130
90 1,4-Dichlorobenzen	10.000	10.198	101.98	70-130
91 alpha-chlorotoluen	10.000	11.913	119.13	70-130
94 1,2-Dichlorobenzen	10.000	10.681	106.81	70-130
96 1,2,4-Trichloroben	10.000	6.899	68.99*	70-130
97 Hexachlorobutadien	10.000	9.581	95.81	60-140
98 Naphthalene	10.000	7.361	73.61	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 47 1,2-Dichloroethane	10.000	9.847	98.47	70-130
\$ 59 Toluene-d8	10.000	9.980	99.80	70-130
\$ 81 Bromofluorobenzene	10.000	10.463	104.63	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0703524B

Work Order Summary

CLIENT: Mr. Jesse Lloyd
The RETEC Group, Inc.
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PROJECT # ORAN2 28 PIKE STREET

DATE RECEIVED: 03/22/2007

CONTACT: Kelly Buettner

DATE COMPLETED: 04/03/2007

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
04A	GRSG5(07)	Modified ASTM D-1945	4.5 "Hg
05A	GRSG6(07)	Modified ASTM D-1945	4.0 "Hg
05AA	GRSG6(07) Duplicate	Modified ASTM D-1945	4.0 "Hg
06A	Lab Blank	Modified ASTM D-1945	NA
07A	LCS	Modified ASTM D-1945	NA

CERTIFIED BY: *Sandra D. Freeman*

DATE: 04/03/07

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1945
The RETEC Group, Inc.
Workorder# 0703524B

The laboratory performed analysis via modified ASTM Method D-1945 for Helium in natural gas using GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>ASTM D-1945</i>	<i>ATL Modifications</i>
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 75-125%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum 3-point linear calibration is performed. The acceptance criterion is %RSD <= 25%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+ Hydrocarbons).
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Six qualifiers may have been used on the data analysis sheets and indicate as follows:

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.

- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Project No. ORAN2-20146-300
Client Orange & Rockland
Site Port Jervis - 28 Pike St.
Subject Example Calculation

Page 1 of 1
Date 04/17/07
By GAM
App. _____



0703524-01A

toluene = 1.5 ppbv
IS = 1,4-difluorobenzene

$$\text{Conc. (ppbv)} = \frac{(\text{analyte response}) (\text{ng IS}) (\text{DF})}{(\text{IS response}) (\text{ICAL RRF})} = \frac{(81549)(10)(1.52)}{(666553)(1.25358)} = 1.48 \text{ ppbv} \checkmark$$

G. A. Nelson
04/17/07

Appendix E

NYSDOH Guidance Document Matrix Tables



Soil Vapor/Indoor Air Matrix 1

October 2006

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)			
	< 0.25	0.25 to < 1	1 to < 5.0	5.0 and above
< 5	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
5 to < 50	5. No further action	6. MONITOR	7. MONITOR	8. MITIGATE
50 to < 250	9. MONITOR	10. MONITOR / MITIGATE	11. MITIGATE	12. MITIGATE
250 and above	13. MITIGATE	14. MITIGATE	15. MITIGATE	16. MITIGATE

No further action:

Given that the compound was not detected in the indoor air sample and that the concentration detected in the sub-slab vapor sample is not expected to significantly affect indoor air quality, no additional actions are needed to address human exposures.

Take reasonable and practical actions to identify source(s) and reduce exposures:

The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures.

MONITOR:

Monitoring, including sub-slab vapor, basement air, lowest occupied living space air, and outdoor air sampling, is needed to determine whether concentrations in the indoor air or sub-slab vapor have changed. Monitoring may also be needed to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined on a site-specific and building-specific basis, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MITIGATE:

Mitigation is needed to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system, and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MONITOR / MITIGATE:

Monitoring or mitigation may be recommended after considering the magnitude of sub-slab vapor and indoor air concentrations along with building- and site-specific conditions.

See additional notes on page 2.

Soil Vapor/Indoor Air Matrix 2

October 2006

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)			
	< 3	3 to < 30	30 to < 100	100 and above
< 100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
100 to < 1,000	5. MONITOR	6. MONITOR / MITIGATE	7. MITIGATE	8. MITIGATE
1,000 and above	9. MITIGATE	10. MITIGATE	11. MITIGATE	12. MITIGATE

No further action:

Given that the compound was not detected in the indoor air sample and that the concentration detected in the sub-slab vapor sample is not expected to significantly affect indoor air quality, no additional actions are needed to address human exposures.

Take reasonable and practical actions to identify source(s) and reduce exposures:

The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures.

MONITOR:

Monitoring, including sub-slab vapor, basement air, lowest occupied living space air, and outdoor air sampling, is needed to determine whether concentrations in the indoor air or sub-slab vapor have changed. Monitoring may also be needed to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined on a site-specific and building-specific basis, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MITIGATE:

Mitigation is needed to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system, and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MONITOR / MITIGATE:

Monitoring or mitigation may be recommended after considering the magnitude of sub-slab vapor and indoor air concentrations along with building- and site-specific conditions.

See additional notes on page 2.

Table 3.2 General format of a decision matrix

Sub-slab Vapor Concentration of Volatile Chemical (mcg/m ³)	Indoor Air Concentration of Volatile Chemical (mcg/m ³)		
	Concentration Range 1	Concentration Range 2	Concentration Range 3
Concentration Range 1	ACTION	ACTION	ACTION
Concentration Range 2	ACTION	ACTION	ACTION
Concentration Range 3	ACTION	ACTION	ACTION

Indoor air and sub-slab vapor concentration ranges in a matrix are selected based on a number of considerations in addition to health risks. For example, factors that are considered when selecting the ranges include, but are not limited to, the following:

- human health risks (i.e., cancer and non-cancer health effects) associated with exposure to the volatile chemical in air;
- the NYSDOH's guidelines for volatile chemicals in air [Table 3.1];
- background concentrations of volatile chemicals in air [Section 3.2.4];
- analytical capabilities currently available; and
- attenuation factors (i.e., the ratio of indoor air to sub-slab vapor concentrations).

3.4.2 Matrices

The NYSDOH has developed two matrices, which are included at the end of Section 3.4, to use as tools in making decisions when soil vapor may be entering buildings. The first decision matrix was originally developed for TCE and the second for PCE. As summarized in Table 3.3, four chemicals have been assigned to the two matrices to date.

Table 3.3 Volatile chemicals and their decision matrices

Chemical	Soil Vapor/Indoor Air Matrix*
Carbon tetrachloride	Matrix 1
Tetrachloroethene (PCE)	Matrix 2
1,1,1-Trichloroethane (1,1,1-TCA)	Matrix 2
Trichloroethene (TCE)	Matrix 1

*The decision matrices are available at the end of Section 3.4.

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