VAPOR INTRUSION SAMPLING AT FIRTH RIXSON AND ARM

ARCH CHEMICALS, INC.
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

NYS Registry No. 828018A

June 2006

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AT FIRTH RIXSON AND ARM

ARCH CHEMICALS
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Prepared by

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for

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June 2006

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1.0 INTRODUCTION

MACTEC Engineering and Consulting, Inc. (MACTEC) has been contracted by Arch Chemicals, Inc., (Arch) to perform environmental investigation activities at their facility in Rochester, NY. MACTEC has prepared this report on behalf of Arch to describe the results of a portion of the 2006 vapor intrusion sampling program at their Rochester facility. This report discusses the results of offsite sampling conducted at adjacent properties owned by Firth Rixson and American Recycling & Manufacturing (ARM).

1.1 SITE HISTORY

Arch is the current owner of the Rochester Plant located at 100 McKee Road, a private industrial road in the southwestern section of Rochester, New York (Figure 1). The plant property is approximately 15.3 acres.

Manufacturing operations have consisted of organic and inorganic chemical production. The primary products are specialty organic chemicals, many of which are produced in small quantities. Due to the nature of the manufacturing operations at Rochester, a large number of organic raw materials, intermediates, and products have been handled at the plant. In 1948, Genesee Research (a fully-owned subsidiary of the Puritan Company) first established a facility at the site for manufacturing automotive specialty products (e.g., brake fluids, polishes, anti-freeze, and specialty organic chemicals). In 1954, Mathieson Chemical Corporation acquired Puritan and merged with Olin Industries to become Olin Mathieson Chemical Corporation. Production of brake fluid and anti-freeze continued for a time, but in the early 1960s production of specialty organic chemicals including Zinc Omadine™ and chloropyridines began. In 1969, Olin Mathieson changed its name to Olin Corporation (Olin), and in 1999 Olin spun off its specialty chemicals business to form an independent company known as Arch Chemicals, Inc. The Arch Rochester plant is the sole manufacturer of chloropyridines in the United States.

The Rochester Plant has been the subject of various environmental investigations since the early 1980s, including a two-phased RI conducted in 1994-1996. These investigations have documented the presence of site-related chemicals, primarily chloropyridines and volatile organic compounds, in soil and groundwater at the site.

A Feasibility Study (FS) was completed in January 2000, in which a range of possible site remedial actions were evaluated. The FS was performed to fulfill part of the requirements of the previous Order on Consent between the NYSDEC and Olin, dated August 23, 1993.

On March 29, 2002, the NYSDEC issued a Record of Decision that selected a remedial action for addressing impacted groundwater beneath and downgradient of the site. This portion of the overall site remedy, contaminated groundwater, is referred to as Operable Unit No. 2 (OU-2). Contaminated soil and bedrock onsite (i.e., source areas) may be addressed separately in the future as Operable Unit No. 1 (OU-1).

In January 2005, the NYSDEC conditionally approved a work plan prepared by Arch for vapor intrusion investigations at both onsite and offsite locations at the Rochester facility. In April 2005, Arch undertook the first phase of those investigations by conducting vapor intrusion sampling (consisting of sub-slab and indoor air samples) at six locations within the facility buildings, plus one ambient (outdoor) air sample. The results of that sampling were discussed in the Onsite Vapor Intrusion Investigation Report (MACTEC, 2005). The sampling of buildings on adjacent properties was delayed while access agreements were negotiated with the offsite facility owners. During the late winter of 2005/2006, access

agreements for two of the offsite properties were finally put in place, and vapor intrusion sampling was completed in March 2006 at Firth Rixson and ARM, as well as at the onsite locations sampled previously at the Arch Chemicals facility.

This report presents the results of just the offsite sampling. The 2006 onsite sampling results were described separately in a report to the NYSDEC dated May 19, 2006 (MACTEC, 2006).

1.2 ORGANIZATION OF REPORT

This Investigation Report consists of five sections, and four appendices:

- Section 1 – Introduction and basis for the project
- Section 2 – Sampling Procedures
- Section 3 – Results
- Section 4 – Conclusions and Recommendations
- Section 5 – References

Appendix A includes the Field Data Records. Appendix B contains meteorological data, while Appendix C provides the laboratory analytical data. Calculations supporting the risk evaluation are included in Appendix D.

2.0 SAMPLING PROCEDURES

The sampling described in this report is part of a multi-phase evaluation of the potential for adverse exposure risks that may result from the soil vapor to indoor air pathway at buildings in and adjacent to the Arch Chemicals site. This phase of sampling was limited to the following offsite locations: the American Recycling & Manufacturing (ARM) facility located just south of the Arch Chemicals property; and the Firth Rixson facility located northwest of Arch Chemicals on the west side of McKee Road. The locations of these facilities in relation to the Arch Chemicals site are shown on Figure 2.

The ARM building includes an office area and several connected warehouse areas used for product and raw material storage, product fabrication, and loading and shipping operations, as shown on Figure 3. There is an upper level over the office area. The building construction is slab on grade, and was built in several phases. ARM produces packaging systems primarily from recycled materials such as pallets, corrugated cardboard, plastics and wood. The operation also uses some virgin materials, principally particle board, in its product manufacturing. Primary operations include sawing and product assembly, including gluing and a minor amount of painting. Prior to being occupied by ARM, the facility was owned by the Eastman Kodak Company. Among other activities, Kodak reportedly filmed commercials on site in two large "studios". No information on underground utilities was available from ARM at the time of the pre-sampling meeting between Arch and ARM.

The Firth Rixson Monroe facility is a metal fabrication plant, producing seamless rings from various alloys for special applications in the aerospace industry other commercial industrial sectors. The facility consists of 60,000 square feet of single-story industrial buildings on approximately 16 acres of land on the western side of McKee Road. The buildings sit on concrete slabs, with no basements or sub-structures. Operations include several forges, furnaces, rolling mills, hydraulic presses and band saws used in producing the ring products. Manufacturing operations take place primarily in the western portions of the facility, while the eastern portion (closest to McKee Road and Arch Chemicals), shown in detail on Figure 4, consists of shipping, inspection, and office space. No further information on building construction or layout was provided by Firth Rixson during the pre-sampling interview.

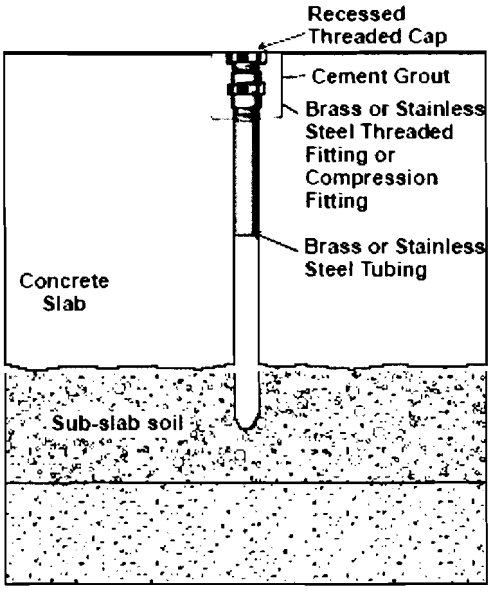
2.1 VAPOR INTRUSION SAMPLING

The following subsections detail the field procedures and analyses for the offsite vapor intrusion sampling.

2.1.1 Sampling Locations. Soil vapor monitoring probes were installed at various locations at the offsite facilities. Locations were reviewed with the NYSDEC prior to installation. The soil vapor monitoring probes were installed at five locations at ARM (see Figure 3), and at two locations at Firth Rixson (see Figure 4). Each location was designated for both an indoor air and a sub-slab soil vapor sample. In addition, one upwind outdoor air sample was collected concurrently with the indoor and sub-slab sampling at each facility.

2.1.2 Soil Vapor Samples. Soil vapor probes were installed through the concrete floor at each sampling location. Vapor probes consist of 0.5-inch outside-diameter (O.D.) stainless steel tubing implanted into the concrete floor slab. A rotary hammer drill was used to initially drill a 1.5-inch diameter socket approximately 2-inches into the concrete floor at each sampling location. A 0.5-inch diameter hole was then advanced through the slab, fully penetrating the concrete and extending slightly

(one to two inches) into the sub-slab soil. A 6-inch length of 0.5-inch O.D. tubing with a threaded fitting was inserted into the drilled hole such that, when capped with a threaded plug, the probe was flush with the floor surface. The probe was then grouted in place using a non-shrinking cement grout (anchoring cement). The figure at right shows a typical probe installation (source: USEPA Office of Research and Development).



One round of soil vapor monitoring was performed after completion of the installation of the soil vapor probes. For sample collection, the threaded cap was removed from the probe, a sampling line was attached with a threaded connector, and the procedures described in Section 2.1.4 were followed for sample collection. Once the canister was filled, the sampling tube was removed and the plug replaced in the sampling probe.

2.1.3 Indoor Air Samples. Indoor air sampling locations were co-located with each of the sub-slab soil vapor sampling points.

Sampling was conducted over an 8-hour period between approximately 8 A.M. and 4 P.M. This period was chosen to correspond with the daily exposure period of interest in characterization of risks for commercial/industrial workers.

2.1.4 Sample Collection Procedures. The following equipment and supplies were used during completion of air sampling:

- 6-L SUMMA® canisters
- Vacuum gauge (0-30 inches of mercury [in. Hg] range)
- Stainless steel inlet filter
- Teflon tubing
- Fixed-orifice flow controller
- ¼-inch Swagelock nuts

The analytical laboratory provided batch-certified SUMMA® canisters that had been evacuated to a pressure of -30 in. Hg prior to sampling. During sampling, canisters collected time-weighted samples by regulating the flow rate into the canister through a stainless steel pre-cleaned flow controller. The controller's orifice was sized appropriately to obtain an 8-hr. time-weighted average sample with a final vacuum pressure less than 5 in. Hg.

The following steps were followed when setting up the canister for sampling:

1. Check the initial vacuum of the labeled canister by removing the brass cap from the canister and connecting the vacuum gauge to the canister, then opening the valve. The pressure should read -30 in. Hg, ± 2 in. Hg. Record the canister starting pressure. Make sure the vacuum gauge is capped off on the outlet or the canister will fill immediately and cannot be used.
2. Close the canister valve (hand tight) and remove the vacuum gauge. Do not overtighten the valve, but ensure the valve is closed. Make sure the valve is closed before removing the gauge or the canister will fill immediately and cannot be used.

3. Remove the brass cap and plastic plug from the flow controller. Fixed-orifice flow controllers are used, so there is no setting of the flowrate in the field.
4. Connect the flow controller outlet to the canister. Tighten the nut (on the flow controller) 1/4 turn beyond finger tight. Verify the tightness of the connection by attempting to rotate the flow controller. It should not be possible to rotate the controller.
5. Connect the filter to the flow controller inlet. Tighten the filter to the flow controller using a wrench. The filter prevents dust or particulates from entering the flow controller.
6. Once the sampling system is placed at the sampling location, open the canister valve fully to initiate sampling. Record the sample start time.

After sampling was complete, the following procedures were performed:

1. Close the valve on the canister and remove the canister from the sample location.
2. Check the final pressure of the labeled canister by removing the flow controller and filter, connecting the vacuum gauge to the canister, and opening the valve. The pressure should be less than 5 in. Hg. Record the final vacuum on the canister label.
3. Close the canister valve and then remove the vacuum gauge.
4. Send the labeled canister accompanied with a chain-of-custody form to the laboratory for analysis.

A Sampling Data Sheet was used to record sampling times and canister readings (see Appendix A, Field Data Records). To identify actual monitoring locations selected in the field, distances from fixed points (walls, beams, etc.) were recorded in the field log book.

Meteorological data during the sampling event was obtained for the Monroe County airport station, which is within a few miles of the site. Meteorological data obtained included: wind speed, wind direction, temperature, dewpoint, and atmospheric pressure. Data is provided in Appendix B.

3.0 RESULTS

Samples were analyzed for VOCs by Severn Trent Laboratories (STL) in Burlington, Vermont, using USEPA Method TO-15 with standard reporting limits. The list of analytes reflects the laboratory's standard TO-15 reporting list. In addition, the laboratory was directed to re-analyze any indoor air or outdoor air samples that were non-detect for either carbon tetrachloride or trichloroethene, using the lab's low-level analytical procedure for those two compounds.

The laboratory analytical reports for the VOCs are included in Appendix C. The following sections provide an evaluation of the reported data for the purpose of identifying target compounds that may have a complete migration pathway from sub-slab soil gas to indoor air in the Arch Chemicals on-site buildings, and to assess the potential health risks associated with exposure to those target compounds in indoor air.

3.1 DATA QUALITY

Laboratory TO-15 analytical results were reviewed for the following parameters:

- Holding Times
- Quality Control Blanks

- Initial Calibration
- Continuing Calibration
- Laboratory Control Samples
- Laboratory Duplicate Precision
- Reporting

All criteria were met with the following exceptions.

In the initial calibration the average relative response factor for 1,4-dioxane (0.044) is less than the QC limit of 0.050. The results for 1,4-dioxane are all non-detect and were rejected (R).

In the continuing calibration associated with a subset of samples: the percent difference for allyl chloride (3-chloropropene) (55) and hexachlorobutadiene (40) exceed the QC limit of 25. The associated samples are IA-06-ARM-009 and SG-06-ARM-194REP. The results for allyl chloride (3-chloropropane) and hexachlorobutadiene in the associated samples are non-detect and were qualified estimated (UJ). The response factors for 1,4-dioxane (0.045, 0.045, and 0.046) are less than the QC limit of 0.050. Results for 1,4-dioxane were qualified previously under the initial calibration criteria.

In the laboratory control sample (LCS) associated with a subset of samples: the percent recoveries for hexachlorobutadiene (140 and 140) in the LCS/LCSD set BEKGLCS exceed the upper QC limit of 130. The associated samples are IA-06-ARM-009 and SG-06-ARM-194REP. The results for hexachlorobutadiene were qualified previously under the continuing calibration criteria.

The laboratory performed a duplicate analysis on sample SG-06-ARM-194. All criteria were met.

With these qualifications, the data is judged to be usable for its intended purpose.

3.2 DATA EVALUATION

The objective of this analysis is to identify contaminants that may occur in indoor air at concentrations that pose a potential risk of regulatory concern and are present in indoor air as a result of sub-slab soil gas intrusion into the indoor air. This analysis involved characterizing cancer and non-cancer risks to workers who may be exposed to contaminants detected in the indoor air, and evaluation of indoor air data using the soil gas data, background data, and published air guideline values. The background data used in this analysis include the outdoor air samples collected during the air sampling event in 2006, as well as ranges of indoor air VOC concentrations developed through a NYSDOH study of homes (1997 – 2003) presented in NYSDOH guidance (NYSDOH, 2005). Air Guideline Values derived by NYSDOH are published for methylene chloride, tetrachloroethene, and trichloroethene (NYSDOH, 2005).

Table 1 presents the analytical indoor air and soil gas data and comparison to risk-based screening levels published by USEPA. The shaded values in Table 1 indicate that detected concentrations in each of the areas sampled exceed risk-based screening levels, indicating that a more thorough evaluation of potential risks is required. The remainder of this subsection presents the risk characterization.

3.2.1 Risk Characterization Methods.

At the ARM building, indoor air samples were collected from an office area and each of four warehouse areas. At the Firth Rixson (FR) building, indoor air samples were collected from an office area and a shipping area. Each of these areas may be occupied daily by workers at each of the facilities. However, the duration of daily exposure at each of these areas for a single worker could range from as little as an

hour or less, to as much as a full work-day shift (8 hours). Daily occupancy would generally not exceed the duration of a work-day shift.

For this evaluation, it was conservatively assumed that workers occupy either the office area or the warehouse (ARM) or shipping area (FR) for a full work-day, each work-day, over their duration of employment. Consequently, it was assumed that exposure to indoor air at each area (i.e., office, warehouse, shipping) occurs 8 hours per day, 5 days per week, over a 25 year period. These exposure assumptions correspond to USEPA-recommended reasonable maximum exposure (RME) parameters for full-time indoor workers (USEPA, 2002b).

The exposure point concentrations (EPCs) are the concentrations reported in the samples collected at each area (e.g., office, shipping). However, to evaluate risks associated with occupancy of the warehouse areas, the arithmetic mean concentrations among all four warehouses (four samples) was used. This approach was taken because it is likely that employees would move among the warehouses and because the detected concentrations of constituents were similar among the indoor air samples collected at the four warehouses.

The background concentrations were represented by the average concentrations reported in samples from the outdoor locations.

Risks were calculated using the following algorithms, which are consistent with USEPA guidance (e.g., USEPA 2002a and USEPA 2002b) and generally accepted risk assessment practices.

Cancer Risk:
ELCR = (EPC x EF x ED x ET x URF) / (ATc x CF)

Hazard Index:
HI = (EPC x EF x ED x ET) / (ATn x CF x RfC)

Where:
EPC = Exposure Point Concentration for indoor air (ug/m^3)
ELCR = Excess lifetime cancer risk (unitless)
HI = Hazard Index (unitless)
ATc = Averaging time, cancer (70 years or 25550 days)
ATn = Averaging time, non-cancer (equal to ED, in days)
CF = Conversion factor (24 hours/day)
EF = Exposure frequency (250 days/year)
ED = Exposure duration (25 years)
ET = Exposure time (8 hours/day)
URF = Unit risk factor (risk per ug/m^3)
RfC = Reference concentration (ug/m^3)

The sources of values for the URF and RfC are the Integrated Risk Information System (IRIS; USEPA on-line data base), USEPA National Center for Environmental Assessment (NCEA), Agency for Toxic Substances and Disease Registry (ATSDR) Minimal Risk Levels (MRLs), and USEPA Health Effects Assessment Summary Tables (HEAST). The risk calculations referred to in this analysis are presented in Appendix D.

3.2.2 Risk Characterization Findings.

The results of the risk characterization are summarized below for each of the two off-site properties.

American Recycling and Manufacturing. Table 2 presents an evaluation and risk analysis for the indoor air quality at the Office and Warehouse locations. The total cancer risk among all chemicals detected in indoor air is 7E-06 for the Office and 2E-05 for the Warehouse, and the hazard index (HI) is 0.1 for the Office and 0.4 for the Warehouse. The principal contributors to cancer risk at the Office area are TCE and chloroform, each with a cancer risk of 2E-06. The principal contributors to cancer risk at the Warehouse area are 1,3-butadiene (5E-06), PCE (4E-06), TCE (3E-06), and benzene (2E-06), and the largest contributor to non-cancer risk is 1,3-butadiene (HI=0.2).

A comparison of indoor air sampling results to soil gas sampling results for the soil gas sample collected from beneath the ARM building (Table 2) indicates that the majority of VOCs were detected in both indoor air and sub-slab soil gas[1]. The presence of these compounds in both soil gas and indoor air suggests that a migration pathway between soil gas and indoor air may be complete. Among the VOCs that were the principal contributors to risk in indoor air, only TCE was not detected in sub-slab soil gas, suggesting that risks associated with TCE cannot be attributed to migration from sub-slab soil gas. The cancer risk associated with compounds that could have a potentially complete migration pathway is 1E-05 and the HI is 0.5.

However, several of the VOCs for which a potentially complete migration pathway may exist were detected in indoor air at concentrations that are lower than NYDOH published health-based screening values and/or are consistent with the range of concentrations typically found in residential homes that have not been impacted by hazardous waste sites. The cancer risk and HI associated with VOCs that were detected in excess of background (or for which no background data were published) or NYDOH screening values are 5E-06 and 0.2, respectively and these risks are due to 1,3-butadiene. 1,3-butadiene was not reported in the published background study.

1,3-butadiene was detected in all four indoor air samples collected at the Warehouse area, but in only one soil gas sample. However, the concentrations detected in indoor air (arithmetic mean of 1.9 ug/m3) are essentially equal to the concentration detected in soil gas (1.8 ug/m3). When the presence of a substance in indoor air is due solely to migration from subsurface soil, the indoor air concentration would not be expected to exceed the soil gas concentration; the concentrations should, at most, be equal. However, equality between soil gas and indoor air concentrations would only occur under ideal steady-state conditions. The fact that the Warehouse area is mechanically ventilated and actively used (e.g., doors opening and closing, movement within the building) indicates that such ideal conditions do not exist. Therefore, the presence of 1,3-butadiene in indoor air in the ARM building cannot be attributed solely to potential migration from sub-slab soil gas, and in fact is likely due to indoor sources. At the time this report has been written, ARM has been unable to confirm whether it uses any products that contain 1,3-butadiene in the facility; however, it should be noted that the levels of 1,3-butadiene detected in indoor air samples were several orders of magnitude below the permissible exposure level (PEL) established by the Occupational Safety and Health Administration (OSHA).

This analysis indicates that none of the VOCs detected in indoor air at the ARM building except 1,3-butadiene:

- have a potentially complete migration pathway, and
- are present at concentrations in excess of typical background concentrations or NYDOH

[1] This evaluation was performed using the indoor air and soil gas data from all areas of the building, to account for the possibility that VOCs detected in indoor air were due to movement of air throughout the building.

screening values (or do not have published background or NYDOH screening values), and
- are associated with cancer risks greater than 1E-06.

Firth Rixson. Table 3 presents an evaluation and risk analysis for the indoor air quality at the Office and Shipping locations. The total cancer risk among all chemicals detected in indoor air is 1E-05 for the Office and 2E-05 for the Shipping area, and the hazard index (HI) is 0.09 for the Office and 1 for the Shipping area. The principal contributor to cancer risk at the Office area is 1,4-dichlorobenzene with a cancer risk of 1E-05. The principal contributors to cancer risk at the Shipping area are benzene (7E-06) and 1,3-butadiene (1E-05), and the largest contributors to non-cancer risk are 1,3-butadiene (HQ=0.7) and 1,2,4-trimethylbenzene (HQ=0.2).

A comparison of indoor air sampling results to soil gas sampling results for the soil gas sample collected from beneath the FR building (Table 3) indicates that the majority of VOCs were detected in both indoor air and sub-slab soil gas[2]. The presence of these compounds in both soil gas and indoor air suggests that a migration pathway between soil gas and indoor air may be complete. Among the VOCs that were the principal contributors to risk in indoor air, 1,3-butadiene was not detected in sub-slab soil gas, suggesting that risks associated with 1,3-butadiene cannot be attributed to migration from sub-slab soil gas. The cancer risk associated with compounds that could have a potentially complete migration pathway is 2E-05 (due to 1,4-dichlorobenzene and benzene) and the HI is 0.5.

Several of the VOCs for which a potentially complete migration pathway may exist were detected in indoor air at concentrations that are lower than NYDOH published health-based screening values and/or or consistent with the range of concentrations typically found in residential homes that have not been impacted by hazardous waste sites. However, 1,4-dichlorobenzene and benzene, representing the principal contributors to risk, were detected in excess of published background (no background data were published for 1,4-dichlorobenzene; therefore, it was conservatively assumed that 1,4-dichlorobenzene concentrations exceed typical background concentrations) and NYDOH screening values are not published for these two VOCs.

1,4-dichlorobenzene and benzene were detected in the indoor air and soil gas samples collected at the Shipping Area. However, the concentrations detected in indoor air are two-times greater than the concentrations detected in soil gas. When the presence of a substance in indoor air is due solely to migration from subsurface soil, the indoor air concentration would not be expected to exceed the soil gas concentration; the concentrations should, at most, be equal. However, equality between soil gas and indoor air concentrations would only occur under ideal steady-state conditions. The fact that the Shipping area is mechanically ventilated and actively used (e.g., doors opening and closing, movement within the building) indicates that such ideal conditions do not exist. Therefore, the presence 1,4-dichlorobenzene and benzene in indoor air in the FR building cannot be attributed solely to potential migration from sub-slab soil gas, and in fact are likely due to indoor sources. Firth Rixson has not provided information to Arch Chemicals on its usage of chemical materials at their facility, but the levels of both benzene and 1,4-dichlorobenzene in indoor air samples were substantially below their respective OSHA PELs.

This analysis indicates that none of the VOCs detected in indoor air at the FR building except 1,4-dichlorobenzene and benzene:
- Have a potentially complete migration pathway, and
- are present at concentrations in excess of typical background concentrations or NYDOH screening values (or do not have published background or NYDOH screening values), and
- are associated with cancer risks greater than 1E-06.

[2] This evaluation was performed using the indoor air and soil gas data from all areas of the building, to account for the possibility that VOCs detected in indoor air were due to movement of air throughout the building.

4.0 CONCLUSIONS

The results of the off-site vapor intrusion sampling event conducted by Arch Chemicals indicate that a complete vapor migration pathway may exist at the ARM and Firth Rixson facilities for some chemicals. Three of these chemicals were found to both exceed background and/or guideline values and pose risks in excess of the NYSDOH point of departure of 1E-06 for cancer risk or HI of 1 for non-cancer risk:

American Recycling and Manufacturing – 1,3-butadiene
Firth Rixson – benzene and 1,4-dichlorobenzene

Comparison of soil gas and indoor air data for these compounds suggests that soil gas is not the sole, or even the primary source of these compounds in indoor air. Additional information from the facility owners would be necessary to determine whether the compounds identified in this evaluation are present in indoor air as a result of current occupational uses. Detected levels of indoor air of each of these chemicals are well below OSHA PELs.

5.0 REFERENCES

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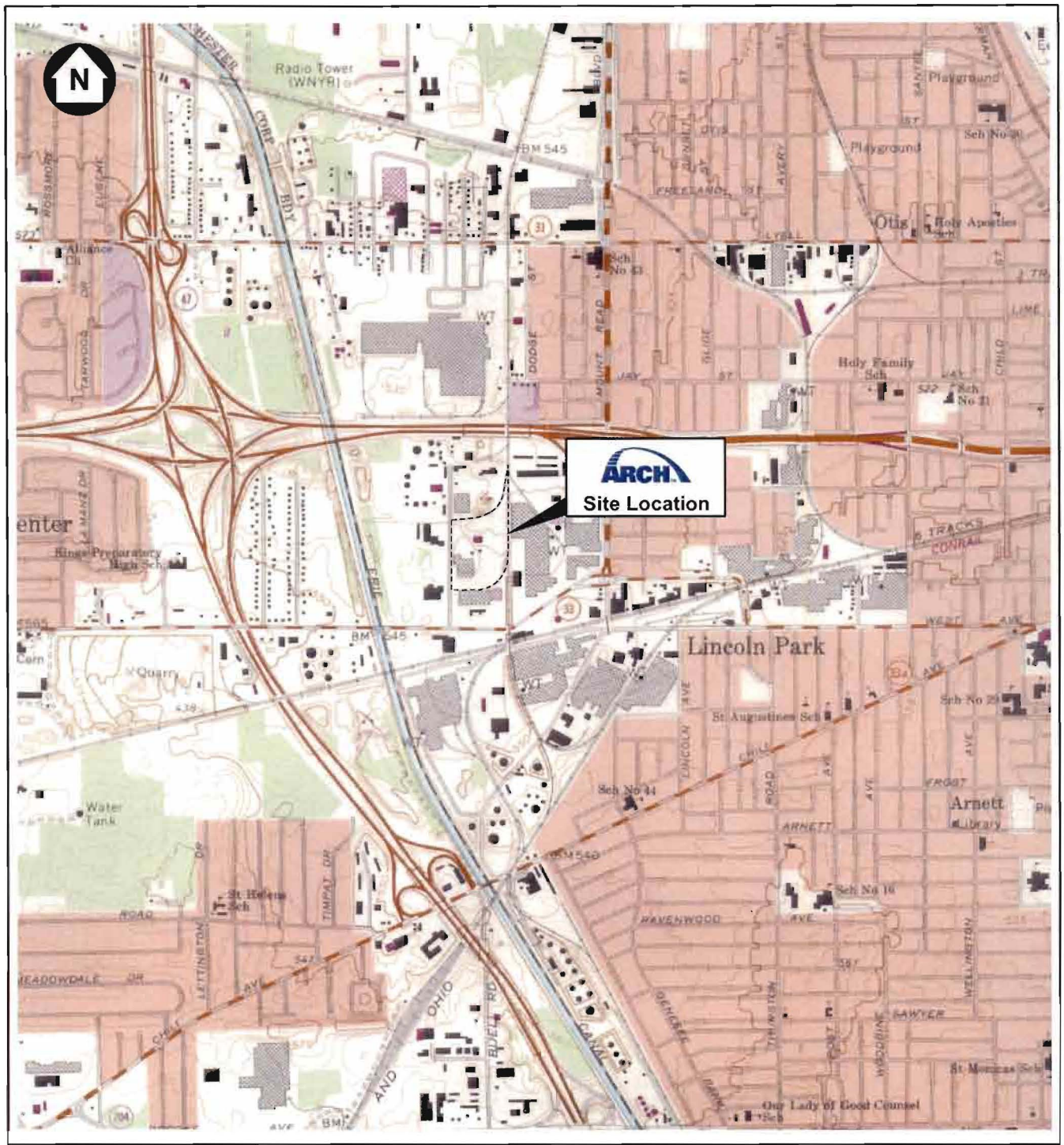
FIGURES



QUADRANGLE LOCATION

Source: USGS Topographic Quadrangle, 7.5 minute Series, Rochester West, N.Y. 1971 (Photorevised 1978).

Scale in Feet

0 2,000 4,000

FIGURE 1
SITE LOCATION MAP
ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

MACTEC

W2003035b.cdr

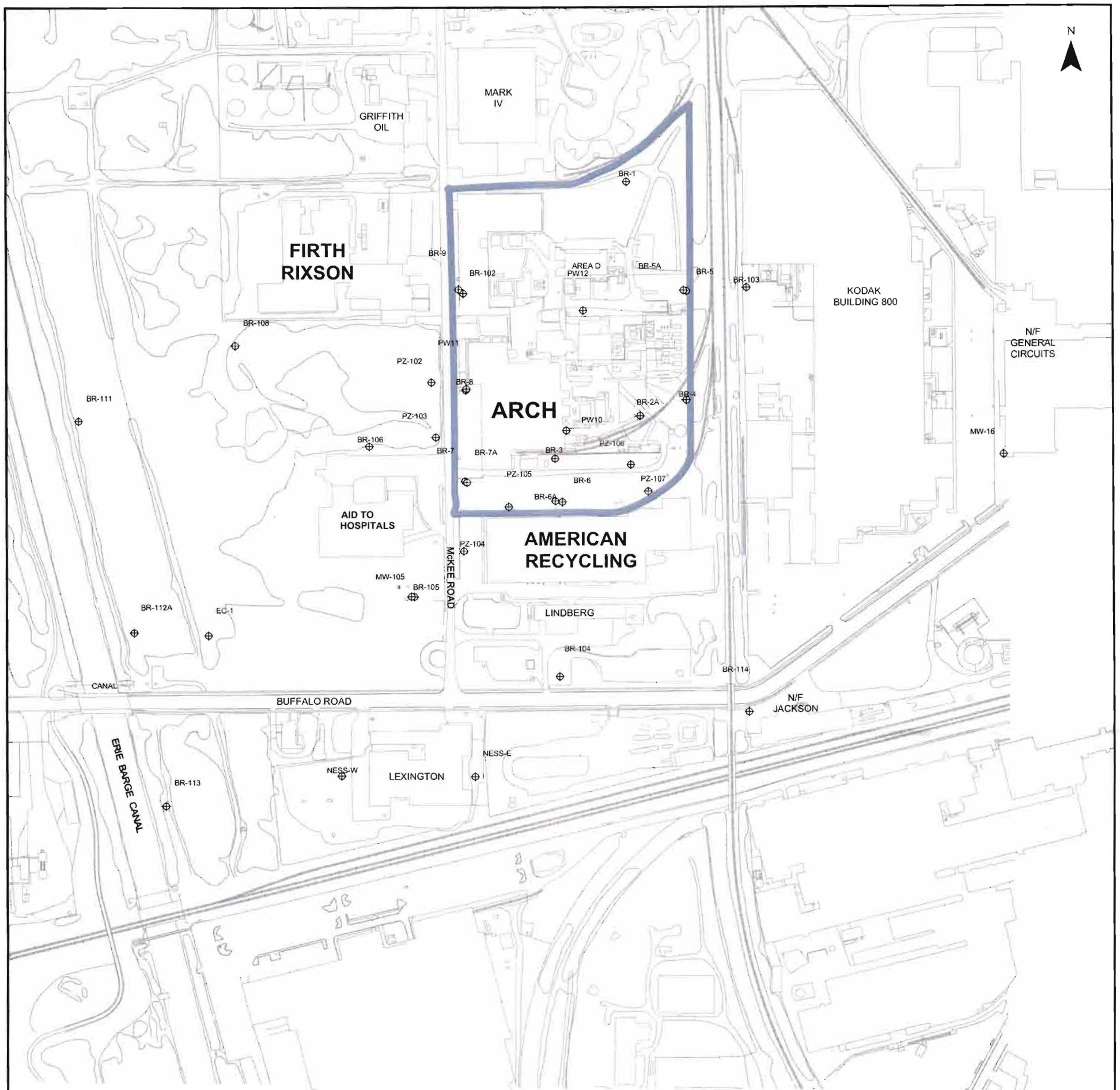
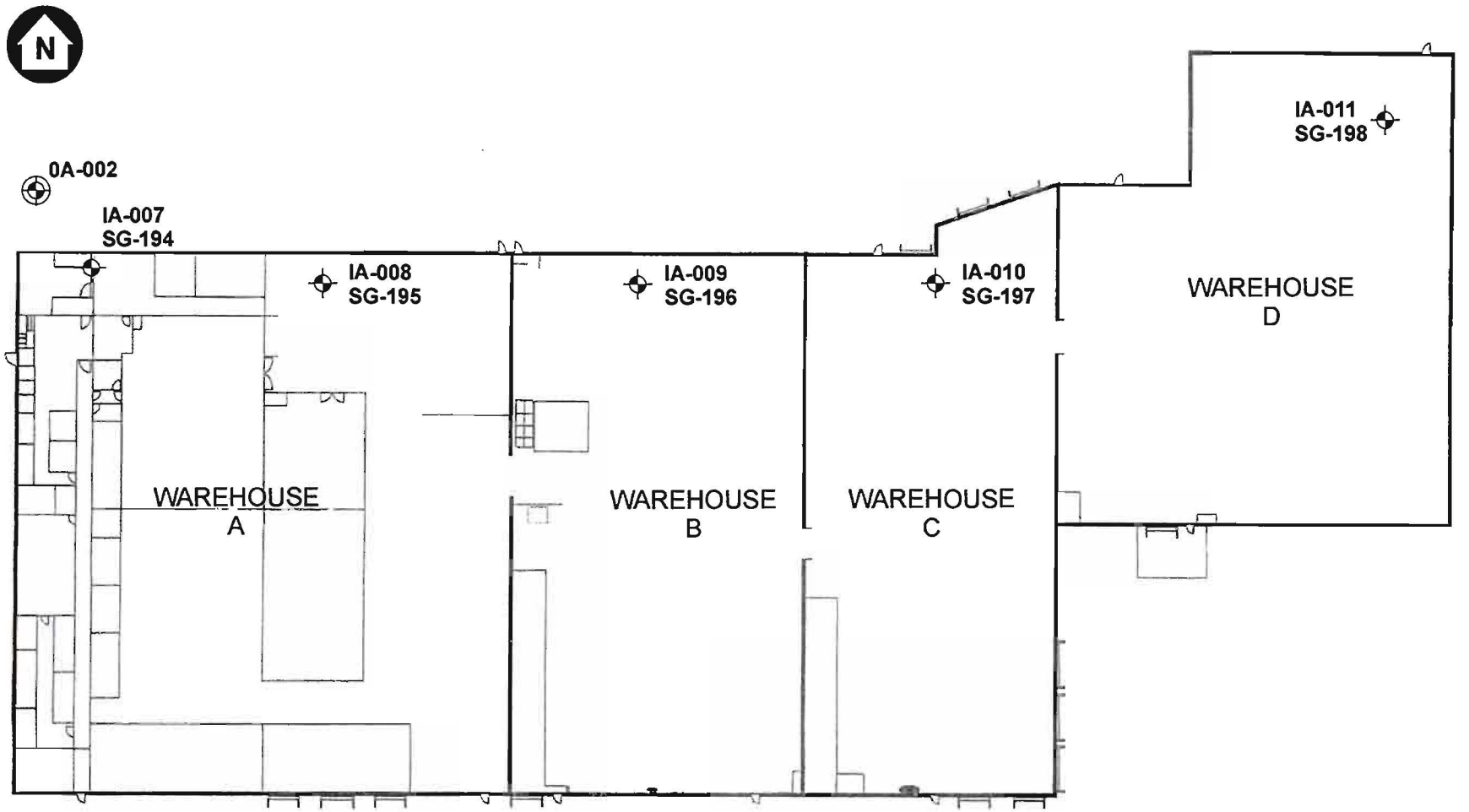


Figure 2
Rochester Plant and Adjacent Properties

Vapor Intrusion Investigation
Arch Chemicals
Rochester, NY

MACTEC, Inc.



LEGEND

Outdoor (Ambient) Air Sample

Indoor Air/Subslab Vapor Sample

Not To Scale

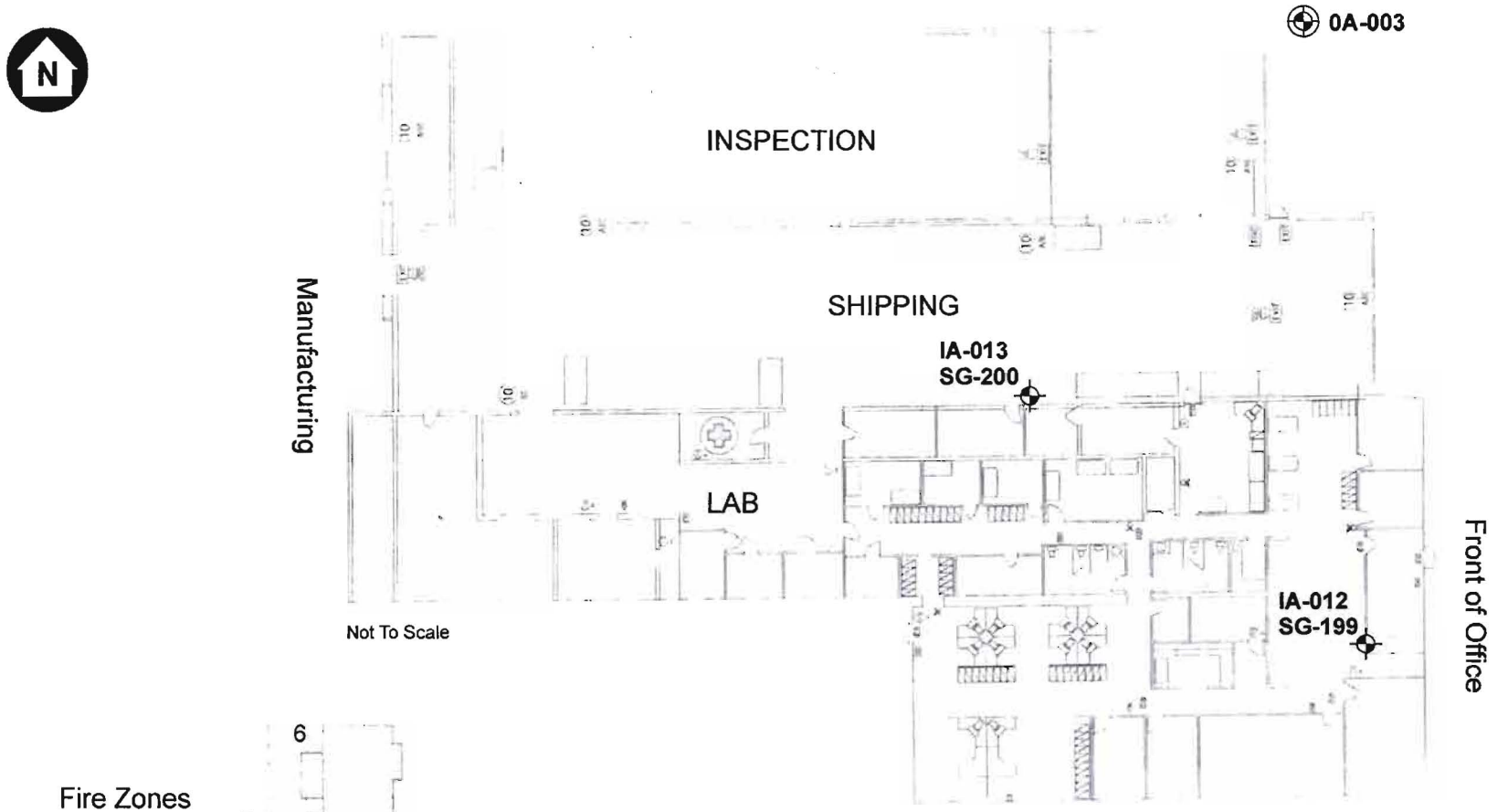
Prepared/Date: BGF / 05-02-06
Checked/Date: JEB / 05-02-06

ARCH Chemicals, Inc.

MACTEC

ARM
Sample Locations
Off-Site Vapor Intrusion Study
Figure 3

PORT2006020A



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Checked/Date: JEB / 05-02-06

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MACTEC

FIRTH RIXSON
Sample Locations
Off-Site Vapor Intrusion Study
Figure 4

PORT2006020

TABLES

Table 1
Comparison of Indoor Air and Soil Gas Data (µg/m³) to Risk-Based Screening Levels

				Air Samples								
		Risk-Based Screening Values		Am Recyc					F Rixson		Am Recyc	F Rixson
				IA-007	IA-008	IA-009	IA-010	IA-011	IA-012	IA-013	OA-002	OA-003
		Indoor Air Generic	Indoor Air Commercial /	IA-06-ARM-007 03/29/06	IA-06-ARM-008 03/29/06	IA-06-ARM-009 03/29/06	IA-06-ARM-010 03/29/06	IA-06-ARM-011 03/29/06	IA-06-FRX-012 03/29/06	IA-06-FRX-013 03/29/06	OA-06-ARM-002 03/29/06	OA-06-FRX-003 03/29/06
Parameter	Units	(Residential)	Industrial	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
1,1,1-Trichloroethane	ug/m3	2200	9636	0.87 U	0.87 U	2.6 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
1,1,2,2-Tetrachloroethane	ug/m3	0.042	0.22	1.1 U	1.1 U	3.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	30000	131400	1.2 U	1.2 U	3.7 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,1,2-Trichloroethane	ug/m3	0.15	0.79	0.87 U	0.87 U	2.6 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
1,1-Dichloroethane	ug/m3	500	2190	0.65 U	0.65 U	1.9 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
1,1-Dichloroethene	ug/m3	200	876	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
1,2,4-Trichlorobenzene	ug/m3	200	876	3 U	3 U	8.9 U	3 U	3 U	3 U	3 U	3 U	3 U
1,2,4-Trimethylbenzene	ug/m3	6.0	26.3	1.2	2.6	2.4 U	4	3.4	1.3	7.4	0.79 U	1
1,2-Dibromoethane	ug/m3	0.011	0.058	1.2 U	1.2 U	3.7 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3	--	--	1.1 U	1.1 U	3.4 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2-Dichlorobenzene	ug/m3	200	876	0.96 U	0.96 U	2.9 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
1,2-Dichloroethane	ug/m3	0.094	0.49	0.65 U	0.65 U	1.9 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
1,2-Dichloroethene (total)	ug/m3	--	--	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
1,2-Dichloropropane	ug/m3	4.0	17.5	0.74 U	0.74 U	2.2 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
1,3,5-Trimethylbenzene	ug/m3	6.0	26.3	0.79 U	0.79 U	2.4 U	1.2	1	0.79 U	2	0.79 U	0.79 U
1,3-Dichlorobenzene	ug/m3	110	482	0.96 U	0.96 U	2.9 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
1,4-Dichlorobenzene	ug/m3	800	3504	0.96 U	0.96 U	2.9 U	0.96 U	0.96 U	26	0.96 U	0.96 U	0.96 U
1,4-Dioxane	ug/m3	--	--	R	R	R	R	R	R	R	R	R
2-Butanone	ug/m3	1000	4380	1.5	4.1	4.4	3.8	3.8	1.2 U	1.2 U	1.2 U	1.2 U
2-Chlorotoluene	ug/m3	--	--	0.83 U	0.83 U	2.5 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
2-Hexanone	ug/m3	--	--	1.6 U	1.6 U	4.9 U	12	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
2-Propanol	ug/m3	--	--	27	9.8 U	29 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	1.4 J
4-Ethyltoluene	ug/m3	--	--	0.79 U	1.7	2.4 U	3.5	2.7	0.79 U	6.4	0.79 U	0.79 U
4-Methyl-2-pentanone	ug/m3	80	350	3.4	1.6 U	4.9 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Acetone	ug/m3	350	1533	31	110	100	33	31	23	310	9.5 U	9.5 U
Allyl chloride	ug/m3	--	--	1.3 U	1.3 U	3.8 UJ	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Benzene	ug/m3	0.31	1.6	1.2	2.1	2.7	2.9	1.6	1.3	11	1.1	1.6
Bromodichloromethane	ug/m3	0.14	0.74	1.1 U	1.1 U	3.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromoform	ug/m3	2.2	11.6	1.7 U	1.7 U	5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Bromomethane	ug/m3	5.0	21.9	0.62 U	0.62 U	1.9 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Butadiene, 1,3-	ug/m3	0.0087	0.046	0.88 U	1.3	3.3	1.8	1.4	0.88 U	6.4	0.88 U	0.88 U
Carbon disulfide	ug/m3	700	3066	1.2 U	2.1	3.7 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Carbon tetrachloride	ug/m3	0.16	0.84	0.69	1 U	0.63	0.69	0.69	0.69	1 U	0.69	0.69
Chlorobenzene	ug/m3	60	263	0.74 U	0.74 U	2.2 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Chlorodibromomethane	ug/m3	0.1	0.53	1.4 U	1.4 U	4.1 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Chloroethane	ug/m3	10000	43800	1.1 U	1.1 U	3.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Chloroform	ug/m3	0.11	0.58	0.98	0.78 U	2.3 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
Chloromethane	ug/m3	2.4	12.6	0.83 U	0.83 U	2.5 U	1.9	1.6	1.6	1.2	1.7	1.7
Cis-1,2-Dichloroethene	ug/m3	35	153	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
cis-1,3-Dichloropropene	ug/m3	0.61	3.2	0.73 U	0.73 U	2.2 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Cyclohexane	ug/m3	--	--	1.8	7.9	3.8	1.1	0.65	0.55 U	1	0.55 U	0.55 U
Dichlorodifluoromethane	ug/m3	200	876	4.5	2.9	5.9 U	3.6	3.3	6.9	3.2	3.7	3.2
Ethyl benzene	ug/m3	2.2	11.6	0.87	1.5	2.1 U	1.4	0.74	0.78	6.1	0.69 U	0.83
Heptane	ug/m3	--	--	1.1	2.1	3.9	1.4	0.74	0.98	2.3	0.66 U	0.98
Hexachlorobutadiene	ug/m3	0.11	0.58	1.7 U	1.7 U	5.1 UJ	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Hexane	ug/m3	200	876	1.4	2.3	4.2 U	2.3	1.4 U	1.4 U	6.3	1.4 U	2.3
Isooctane	ug/m3	--	--	0.79	1	2.2 U	1.8	0.75 U	0.93	5.1	0.75 U	2
Methyl Tertbutyl Ether	ug/m3	3000	13140.0	1.4 U	1.4 U	4.3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U

6/21/2006
Prepared by: KJC
Checked by: JHP

Table 1
Comparison of Indoor Air and Soil Gas Data (µg/m³) to Risk-Based Screening Levels

				Air Samples								
		Risk-Based Screening Values		Ain Recyc					F Rixson		Ain Recyc	F Rixson
				IA-007	IA-008	IA-009	IA-010	IA-011	IA-012	IA-013	OA-002	OA-003
		Indoor Air	Indoor Air	IA-06-ARM-007	IA-06-ARM-008	IA-06-ARM-009	IA-06-ARM-010	IA-06-ARM-011	IA-06-FRX-012	IA-06-FRX-013	OA-06-ARM-002	OA-06-FRX-003
		Generic	Commercial/	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06
Parameter	Units	(Residential)	Industrial	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Methylene chloride	ug/m3	5.2	27	5.2	22	11	2.7	2	1.4 U	1.4 U	1.4 U	1.4 U
o-Xylene	ug/m3	7000	30660	0.83	1.7	2.1 U	1.7	0.96	0.96	6.9	0.69 U	1
Styrene	ug/m3	1000	4380	0.68 U	1.5	2 U	2.6	0.85	0.68 U	1.7	0.68 U	0.68 U
t-Butyl alcohol	ug/m3	--	--	12 U	12 U	36 U	12 U	12 U	12 U	12 U	12 U	12 U
Tetrachloroethene	ug/m3	0.81	4.3	2.2	6.7	7.5	11	12	1.1 U	1.1 U	1.1 U	1.1 U
Tetrahydrofuran	ug/m3	--	--	12 U	12 U	35 U	12 U	12 U	12 U	12 U	12 U	12 U
Toluene	ug/m3	400	1752	11	14	13	9.4	4.9	5.7	140	3.8	6
trans-1,2-Dichloroethene	ug/m3	70	307	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
trans-1,3-Dichloropropene	ug/m3	0.61	3.2	0.73 U	0.73 U	2.2 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Trichloroethene	ug/m3	0.022	0.12	0.25	0.86 U	0.33	0.32	0.22	0.21 U	0.86 U	0.21 U	0.21 U
Trichlorofluoromethane	ug/m3	700	3066	130	140	56	2.2	2.5	1.8	1.6	1.9	1.6
Vinyl bromide	ug/m3	--	--	0.7 U	0.7 U	2.1 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Vinyl chloride	ug/m3	0.28	1.5	0.41 U	0.41 U	1.2 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Xylene, m/p	ug/m3	7000	30660	2.3	4.8	5.2 U	4	2	2.6	20	1.7 U	2.3
Xylenes, Total	ug/m3	7000	30660	3.2	6.9	2.1 U	6.1	3.1	3.6	28	0.69 U	3.4

Generic Indoor Air Screening Values are taken from Table 2c of the EPA Vapor Intrusion Guidance (EPA, 2002) and are based on a target cancer risk of 1E-06 and a target hazard index of 1 for residential exposures to indoor air.

Generic Soil Gas Screening Values are taken from Table 2c of the EPA Vapor Intrusion Guidance, and are based on an attenuation factor of 0.1 and a target cancer risk of 1E-06 and a target hazard index of 1 for migration of soil gas to residences with basements and subsequent residential exposures to indoor air.

The Commercial/Industrial indoor air and soil gas screening values were derived by adjusting the generic (residential-based) values for exposure time, exposure frequency, and exposure duration applicable to full-time occupational exposures, as follows:

For risk-based values based on cancer risk, the adjustment to an exposure of 8-hours per day, 250 days per year, for 25 years is: (24/8) x (365/250) x (30/25) = 5.25

For risk-based values based on non-cancer risk, the adjustemtn to an exposrue of 8-hours per day, 250 days per year is: (24/8) x (365/250) = 4.38

Shading indicates that a detected concentration exceeds the Commercial/Industrial risk-based valuc

-- - Not applicable: constituent not detected at a concentration greater than screening value.

EPA, 2002. Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils. OSWER. November 29, 2002.

Table 1
Comparison of Indoor Air and Soil Gas Data (µg/m³) to Risk-Based Screening Levels

		Risk-Based Screening Values		Soil Gas Samples						
				Am Recyc					F Rixson	
				SG-194	SG-195	SG-196	SG-197	SG-198	SG-199	SG-200
		Soil Gas Generic	Soil Gas Commercial /	SG-06-ARM-194	SG-06-ARM-195	SG-06-ARM-196	SG-06-ARM-197	SG-06-ARM-198	SG-06-FRX-199	SG-06-FRX-200
				03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06
Parameter	Units	(Residential)	Industrial	Sample	Sample	Sample	Sample	Sample	Sample	Sample
1,1,1-Trichloroethane	ug/m3	22000	96360	0.87 U	1.1 U	1.3	0.87 U	0.87 U	3.7 U	2200
1,1,2,2-Tetrachloroethane	ug/m3	0.42	2.21	1.1 U	1.4 U	1.1 U	1.1 U	1.1 U	4.6 U	1.1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	300000	1314000	38	1.5 U	8.4	8.4	1.2 U	5.1 U	1.2 U
1,1,2-Trichloroethane	ug/m3	1.5	7.88	0.87 U	1.1 U	0.87 U	0.87 U	0.87 U	3.7 U	0.87 U
1,1-Dichloroethane	ug/m3	5000	21900	0.65 U	0.81 U	0.65 U	0.65 U	0.65 U	2.7 U	11
1,1-Dichloroethene	ug/m3	2000	8760	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U
1,2,4-Trichlorobenzene	ug/m3	2000	8760	3 U	3.7 U	3 U	3 U	3 U	13 U	3 U
1,2,4-Trimethylbenzene	ug/m3	60.0	262.8	3.7	4.3	3.7	2.5	2.6	4.4	4.3
1,2-Dibromoethane	ug/m3	0.11	0.578	1.2 U	1.5 U	1.2 U	1.2 U	1.2 U	5.1 U	1.2 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3	--	--	1.1 U	1.4 U	1.1 U	1.1 U	1.1 U	4.7 U	1.1 U
1,2-Dichlorobenzene	ug/m3	2000	8760	0.96 U	1.2 U	0.96 U	0.96 U	0.96 U	4 U	0.96 U
1,2-Dichloroethane	ug/m3	0.94	4.94	0.65 U	0.81 U	0.65 U	0.65 U	0.65 U	2.7 U	0.65 U
1,2-Dichloroethene (total)	ug/m3	--	--	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U
1,2-Dichloropropane	ug/m3	40.0	175.2	0.74 U	0.92 U	0.74 U	0.74 U	0.74 U	3.1 U	0.74 U
1,3,5-Trimethylbenzene	ug/m3	60.0	262.8	1.3	1.5	0.84	0.79 U	0.79 U	3.3 U	1.3
1,3-Dichlorobenzene	ug/m3	1100	4818	0.96 U	1.2 U	0.96 U	0.96 U	0.96 U	4 U	0.96 U
1,4-Dichlorobenzene	ug/m3	8000	35040	0.96 U	1.2 U	0.96 U	0.96 U	0.96 U	10	0.96 U
1,4-Dioxane	ug/m3	--	--	R	R	R	R	R	R	R
2-Butanone	ug/m3	10000	43800	1.2 U	1.5 U	3.2	3.2	5.6	10	3.8
2-Chlorotoluene	ug/m3	--	--	0.83 U	1 U	0.83 U	0.83 U	0.83 U	3.5 U	0.83 U
2-Hexanone	ug/m3	--	--	1.6 U	2 U	1.6 U	1.6 U	1.6 U	7 U	1.6 U
2-Propanol	ug/m3	--	--	9.8 U	12 U	9.8 U	9.8 U	18	42 U	10
4-Ethyltoluene	ug/m3	--	--	2.6	2.9	2.9	1.8	1.7	3.3 U	3.3
4-Methyl-2-pentanone	ug/m3	800	3504	1.6 U	2	1.6 U	1.6 U	1.6 U	7 U	1.8
Acetone	ug/m3	3500	15330	9.5 U	12 U	23	21	43	97	55
Allyl chloride	ug/m3	--	--	1.3 U	1.6 U	1.3 U	1.3 U	1.3 U	5.3 U	1.3 U
Benzene	ug/m3	3.1	16.3	0.51 U	0.64 U	4.8	1.6	1.6	3.5	5.4
Bromodichloromethane	ug/m3	1.4	7.35	1.1 U	1.3 U	1.1 U	1.1 U	1.1 U	4.5 U	1.1 U
Bromoform	ug/m3	22	115.5	1.7 U	2.1 U	1.7 U	1.7 U	1.7 U	6.9 U	1.7 U
Bromomethane	ug/m3	50.0	219.0	0.62 U	0.78 U	0.62 U	0.62 U	0.62 U	2.6 U	0.62 U
Butadiene, 1,3-	ug/m3	0.087	0.457	0.88 U	1.1 U	1.8	0.88 U	0.88 U	3.8 U	0.88 U
Carbon disulfide	ug/m3	7000	30660	3.1	1.6 U	5.6	4	7.5	9.3	3.4
Carbon tetrachloride	ug/m3	1.6	8.4	1 U	1.3 U	1 U	3.9	1 U	4.2 U	1 U
Chlorobenzene	ug/m3	600	2628	0.74 U	0.92 U	0.74 U	0.74 U	0.74 U	3.1 U	0.74 U
Chlorodibromomethane	ug/m3	1	5.25	1.4 U	1.7 U	1.4 U	1.4 U	1.4 U	5.7 U	1.4 U
Chloroethane	ug/m3	100000	438000	1.1 U	1.3 U	1.1 U	1.1 U	1.1 U	4.5 U	1.1 U
Chloroform	ug/m3	1.1	5.78	0.78 U	0.98 U	1.2	0.78 U	0.78 U	3.3 U	4.2
Chloromethane	ug/m3	24	126.0	0.83 U	1 U	0.83 U	0.83 U	0.83 U	3.5 U	0.83 U
Cis-1,2-Dichloroethene	ug/m3	350	1533	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U
cis-1,3-Dichloropropene	ug/m3	6.1	32.0	0.73 U	0.91 U	0.73 U	0.73 U	0.73 U	3 U	0.73 U
Cyclohexane	ug/m3	--	--	0.69	0.69 U	8.9	2.8	5.2	6.9	210 J
Dichlorodifluoromethane	ug/m3	2000	8760	3.2	2.5 U	4	3.2	2 U	8.4 U	2.3
Ethyl benzene	ug/m3	22	115.5	1.2	1.8	2.7	2	1.7	3.8	4
Heptane	ug/m3	--	--	0.66 U	0.82 U	11	1.7	1.6	7	5.3
Hexachlorobutadiene	ug/m3	1.1	5.78	1.7 U	2.1 U	1.7 U	1.7 U	1.7 U	7.1 U	1.7 U
Hexane	ug/m3	2000	8760	1.4 U	1.8 U	16	2.4	3.9	6 U	11
Isooctane	ug/m3	--	--	0.75 U	0.93 U	0.75 U	0.75 U	0.75 U	3.1 U	1.1
Methyl Tertbutyl Ether	ug/m3	30000	131400.0	1.4 U	1.8 U	1.4 U	1.4 U	1.4 U	6.1 U	1.4 U

6/21/2006
Prepared by: KJC
Checked by: JHP

Table 1
Comparison of Indoor Air and Soil Gas Data (µg/m³) to Risk-Based Screening Levels

		Risk-Based Screening Values		Soil Gas Samples						
				Am Recyc					F Rixson	
				SG-194	SG-195	SG-196	SG-197	SG-198	SG-199	SG-200
		Soil Gas Generic	Soil Gas Commercial /	SG-06-ARM-194 03/29/06	SG-06-ARM-195 03/29/06	SG-06-ARM-196 03/29/06	SG-06-ARM-197 03/29'06	SG-06-ARM-198 03/29/06	SG-06-FRX-199 03/29/06	SG-06-FRX-200 03/29/06
Parameter	Units	(Residential)	Industrial	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Methylene chloride	ug/m3	52	273	1.4 U	1.7 U	2.8	1.4 U	1.5	5.9 U	1.4 U
o-Xylene	ug/m3	70000	306600	2.1	3.1	3.4	2	1.8	3.8	4.1
Styrene	ug/m3	10000	43800	1	1.8	2.6	2.2	0.98	2.8 J	1.8
t-Butyl alcohol	ug/m3	--	--	12 U	15 U	12 U	12 U	12 U	52 U	12 U
Tetrachloroethene	ug/m3	8.1	42.5	1.9	3.7	6.8	4.7	7.5	4.9	28
Tetrahydrofuran	ug/m3	--	--	12 U	15 U	12 U	12 U	12 U	50 U	12 U
Toluene	ug/m3	4000	17520	9	15	31	26	30	57	75
trans-1,2-Dichloroethene	ug/m3	700	3066	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U
trans-1,3-Dichloropropene	ug/m3	6.1	32.0	0.73 U	0.91 U	0.73 U	0.73 U	0.73 U	3 U	0.73 U
Trichloroethene	ug/m3	0.22	1.16	0.86 U	1.1 U	0.86 U	0.86 U	0.86 U	3.6 U	2.8
Trichlorofluoromethane	ug/m3	7000	30660	44	1.1 U	26	2.6	2.5	3.8 U	2.2
Vinyl bromide	ug/m3	--	--	0.7 U	0.87 U	0.7 U	0.7 U	0.7 U	2.9 U	0.7 U
Vinyl chloride	ug/m3	2.8	14.7	0.41 U	0.51 U	0.41 U	0.41 U	0.41 U	1.7 U	0.41 U
Xylene, m/p	ug/m3	70000	306600	3.9	6.5	8.3	4.8	4.2	8.7	11
Xylenes, Total	ug/m3	70000	306600	6.1	10	12	6.9	6.1	13	16

Generic Indoor Air Screening Values are taken from Table 2c of the EPA Vapor Intrusion Guidance (EPA. 2002) and are based on a target cancer risk of 1E-06 and a target hazard index of 1 for residential exposures to indoor air.

Generic Soil Gas Screening Values are taken from Table 2c of the EPA Vapor Intrusion Guidance, and are based on an attenuation factor of 0.1 and a target cancer risk of 1E-06 and a target hazard index of 1 for migration of soil gas to residences with basements and subsequent residential exposures to indoor air.

The Commercial/Industrial indoor air and soil gas screening values were derived by adjusting the generic (residential-based) values for exposure time, exposure frequency, and exposure duration applicable to full-time occupational exposures, as follows:

For risk-based values based on cancer risk, the adjustment to an exposure of 8-hours per day, 250 days per year, for 25 years is: (24/8) x (365/250) x (30/25) = 5.25

For risk-based values based on non-cancer risk, the adjustemtn to an exposrue of 8-hours per day, 250 days per year is: (24/8) x (365/250) = 4.38

Shading indicates that a detected concentration exceeds the Commercial/Industrial risk-based value

-- - Not applicable: constituent not detected at a concentration greater than screening value.

EPA, 2002. Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils. OSWER. November 29, 2002.

Table 2
Pathway Completeness and Risk Analysis
American Recycle & Manufacturing (ARM)

		Air Samples						Soil Gas Samples				
		Am Recyc					Outdoor Air	Am Recyc				
		IA-007	IA-008	IA-009	IA-010	IA-011	OA-002	SG-194	SG-195	SG-196	SG-197	SG-198
		IA-06-ARM-007	IA-06-ARM-008	IA-06-ARM-009	IA-06-ARM-010	IA-06-ARM-011	OA-06-ARM-002	SG-06-ARM-194	SG-06-ARM-195	SG-06-ARM-196	SG-06-ARM-197	SG-06-ARM-198
		03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06
Parameter	Units	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
1,1,1-Trichloroethane	ug/m3	0.87 U	0.87 U	2.6 U	0.87 U	0.87 U	0.87 U	0.87 U	1.1 U	1.3	0.87 U	0.87 U
1,1,2,2-Tetrachloroethane	ug/m3	1.1 U	1.1 U	3.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	1.2 U	1.2 U	3.7 U	1.2 U	1.2 U	1.2 U	38	1.5 U	8.4	8.4	1.2 U
1,1,2-Trichloroethane	ug/m3	0.87 U	0.87 U	2.6 U	0.87 U	0.87 U	0.87 U	0.87 U	1.1 U	0.87 U	0.87 U	0.87 U
1,1-Dichloroethane	ug/m3	0.65 U	0.65 U	1.9 U	0.65 U	0.65 U	0.65 U	0.65 U	0.81 U	0.65 U	0.65 U	0.65 U
1,1-Dichloroethene	ug/m3	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U
1,2,4-Trichlorobenzene	ug/m3	3 U	3 U	8.9 U	3 U	3 U	3 U	3 U	3.7 U	3 U	3 U	3 U
1,2,4-Trimethylbenzene	ug/m3	1.2	2.6	2.4 U	4	3.4	0.79 U	3.7	4.3	3.7	2.5	2.6
1,2-Dibromoethane	ug/m3	1.2 U	1.2 U	3.7 U	1.2 U	1.2 U	1.2 U	1.2 U	1.5 U	1.2 U	1.2 U	1.2 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3	1.1 U	1.1 U	3.4 U	1.1 U	1.1 U	1.1 U	1.1 U	1.4 U	1.1 U	1.1 U	1.1 U
1,2-Dichlorobenzene	ug/m3	0.96 U	0.96 U	2.9 U	0.96 U	0.96 U	0.96 U	0.96 U	1.2 U	0.96 U	0.96 U	0.96 U
1,2-Dichloroethane	ug/m3	0.65 U	0.65 U	1.9 U	0.65 U	0.65 U	0.65 U	0.65 U	0.81 U	0.65 U	0.65 U	0.65 U
1,2-Dichloroethene (total)	ug/m3	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U
1,2-Dichloropropane	ug/m3	0.74 U	0.74 U	2.2 U	0.74 U	0.74 U	0.74 U	0.74 U	0.92 U	0.74 U	0.74 U	0.74 U
1,3,5-Trimethylbenzene	ug/m3	0.79 U	0.79 U	2.4 U	1.2	1	0.79 U	1.3	1.5	0.84	0.79 U	0.79 U
1,3-Dichlorobenzene	ug/m3	0.96 U	0.96 U	2.9 U	0.96 U	0.96 U	0.96 U	0.96 U	1.2 U	0.96 U	0.96 U	0.96 U
1,4-Dichlorobenzene	ug/m3	0.96 U	0.96 U	2.9 U	0.96 U	0.96 U	0.96 U	0.96 U	1.2 U	0.96 U	0.96 U	0.96 U
1,4-Dioxane	ug/m3	R	R	R	R	R	R	R	R	R	R	R
2-Butanone	ug/m3	1.5	4.1	4.4	3.8	3.8	1.2 U	1.2 U	1.5 U	3.2	3.2	5.6
2-Chlorotoluene	ug/m3	0.83 U	0.83 U	2.5 U	0.83 U	0.83 U	0.83 U	0.83 U	1 U	0.83 U	0.83 U	0.83 U
2-Hexanone	ug/m3	1.6 U	1.6 U	4.9 U	12	1.6 U	1.6 U	1.6 U	2 U	1.6 U	1.6 U	1.6 U
2-Propanol	ug/m3	27	9.8 U	29 U	9.8 U	9.8 U	9.8 U	9.8 U	12 U	9.8 U	9.8 U	18
4-Ethyltoluene	ug/m3	0.79 U	1.7	2.4 U	3.5	2.7	0.79 U	2.6	2.9	2.9	1.8	1.7
4-Methyl-2-pentanone	ug/m3	3.4	1.6 U	4.9 U	1.6 U	1.6 U	1.6 U	1.6 U	2	1.6 U	1.6 U	1.6 U
Acetone	ug/m3	31	110	100	33	31	9.5 U	9.5 U	12 U	23	21	43
Allyl chloride	ug/m3	1.3 U	1.3 U	3.8 UJ	1.3 U	1.3 U	1.3 U	1.3 U	1.6 U	1.3 U	1.3 U	1.3 U
Benzene	ug/m3	1.2	2.1	2.7	2.9	1.6	1.1	0.51 U	0.64 U	4.8	1.6	1.6
Bromodichloromethane	ug/m3	1.1 U	1.1 U	3.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.3 U	1.1 U	1.1 U	1.1 U
Bromoform	ug/m3	1.7 U	1.7 U	5 U	1.7 U	1.7 U	1.7 U	1.7 U	2.1 U	1.7 U	1.7 U	1.7 U
Bromomethane	ug/m3	0.62 U	0.62 U	1.9 U	0.62 U	0.62 U	0.62 U	0.62 U	0.78 U	0.62 U	0.62 U	0.62 U
Butadiene, 1,3-	ug/m3	0.88 U	1.3	3.3	1.8	1.4	0.88 U	0.88 U	1.1 U	1.8	0.88 U	0.88 U
Carbon disulfide	ug/m3	1.2 U	2.1	3.7 U	1.2 U	1.2 U	1.2 U	3.1	1.6 U	5.6	4	7.5
Carbon tetrachloride	ug/m3	0.69	1 U	0.63	0.69	0.69	0.69	1 U	1.3 U	1 U	3.9	1 U
Chlorobenzene	ug/m3	0.74 U	0.74 U	2.2 U	0.74 U	0.74 U	0.74 U	0.74 U	0.92 U	0.74 U	0.74 U	0.74 U
Chlorodibromomethane	ug/m3	1.4 U	1.4 U	4.1 U	1.4 U	1.4 U	1.4 U	1.4 U	1.7 U	1.4 U	1.4 U	1.4 U
Chloroethane	ug/m3	1.1 U	1.1 U	3.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.3 U	1.1 U	1.1 U	1.1 U
Chloroform	ug/m3	0.98	0.78 U	2.3 U	0.78 U	0.78 U	0.78 U	0.78 U	0.98 U	1.2	0.78 U	0.78 U
Chloromethane	ug/m3	0.83 U	0.83 U	2.5 U	1.9	1.6	1.7	0.83 U	1 U	0.83 U	0.83 U	0.83 U
Cis-1,2-Dichloroethene	ug/m3	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U
cis-1,3-Dichloropropene	ug/m3	0.73 U	0.73 U	2.2 U	0.73 U	0.73 U	0.73 U	0.73 U	0.91 U	0.73 U	0.73 U	0.73 U
Cyclohexane	ug/m3	1.8	7.9	3.8	1.1	0.65	0.55 U	0.69	0.69 U	8.9	2.8	5.2
Dichlorodifluoromethane	ug/m3	4.5	2.9	5.9 U	3.6	3.3	3.7	3.2	2.5 U	4	3.2	2 U
Ethyl benzene	ug/m3	0.87	1.5	2.1 U	1.4	0.74	0.69 U	1.2	1.8	2.7	2	1.7
Heptane	ug/m3	1.1	2.1	3.9	1.4	0.74	0.66 U	0.66 U	0.82 U	11	1.7	1.6
Hexachlorobutadiene	ug/m3	1.7 U	1.7 U	5.1 UJ	1.7 U	1.7 U	1.7 U	1.7 U	2.1 U	1.7 U	1.7 U	1.7 U
Hexane	ug/m3	1.4	2.3	4.2 U	2.3	1.4 U	1.4 U	1.4 U	1.8 U	16	2.4	3.9
Isooctane	ug/m3	0.79	1	2.2 U	1.8	0.75 U	0.75 U	0.75 U	0.93 U	0.75 U	0.75 U	0.75 U

6/21/2006
Prepared by: KJC
Checked by: JHP

Table 2
Pathway Completeness and Risk Analysis
American Recycle & Manufacturing (ARM)

		Air Samples						Soil Gas Samples				
		Am Recyc					Outdoor Air	Am Recyc				
		IA-007	IA-008	IA-009	IA-010	IA-011	OA-002	SG-194	SG-195	SG-196	SG-197	SG-198
		IA-06-ARM-007	IA-06-ARM-008	IA-06-ARM-009	IA-06-ARM-010	IA-06-ARM-011	OA-06-ARM-002	SG-06-ARM-194	SG-06-ARM-195	SG-06-ARM-196	SG-06-ARM-197	SG-06-ARM-198
		03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06
Parameter	Units	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Methyl Tertbutyl Ether	ug/m3	1.4 U	1.4 U	4.3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.8 U	1.4 U	1.4 U	1.4 U
Methylene chloride	ug/m3	5.2	22	11	2.7	2	1.4 U	1.4 U	1.7 U	2.8	1.4 U	1.5
o-Xylene	ug/m3	0.83	1.7	2.1 U	1.7	0.96	0.69 U	2.1	3.1	3.4	2	1.8
Styrene	ug/m3	0.68 U	1.5	2 U	2.6	0.85	0.68 U	1	1.8	2.6	2.2	0.98
t-Butyl alcohol	ug/m3	12 U	12 U	36 U	12 U	12 U	12 U	12 U	15 U	12 U	12 U	12 U
Tetrachloroethene	ug/m3	2.2	6.7	7.5	11	12	1.1 U	1.9	3.7	6.8	4.7	7.5
Tetrahydrofuran	ug/m3	12 U	12 U	35 U	12 U	12 U	12 U	12 U	15 U	12 U	12 U	12 U
Toluene	ug/m3	11	14	13	9.4	4.9	3.8	9	15	31	26	30
trans-1,2-Dichloroethene	ug/m3	0.63 U	0.63 U	1.9 U	0.63 U	0.63 U	0.63 U	0.63 U	0.79 U	0.63 U	0.63 U	0.63 U
trans-1,3-Dichloropropene	ug/m3	0.73 U	0.73 U	2.2 U	0.73 U	0.73 U	0.73 U	0.73 U	0.91 U	0.73 U	0.73 U	0.73 U
Trichloroethene	ug/m3	0.25	0.86 U	0.33	0.32	0.22	0.21 U	0.86 U	1.1 U	0.86 U	0.86 U	0.86 U
Trichlorofluoromethane	ug/m3	130	140	56	2.2	2.5	1.9	44	1.1 U	26	2.6	2.5
Vinyl bromide	ug/m3	0.7 U	0.7 U	2.1 U	0.7 U	0.7 U	0.7 U	0.7 U	0.87 U	0.7 U	0.7 U	0.7 U
Vinyl chloride	ug/m3	0.41 U	0.41 U	1.2 U	0.41 U	0.41 U	0.41 U	0.41 U	0.51 U	0.41 U	0.41 U	0.41 U
Xylene, m/p	ug/m3	2.3	4.8	5.2 U	4	2	1.7 U	3.9	6.5	8.3	4.8	4.2
Xylenes, Total	ug/m3	3.2	6.9	2.1 U	6.1	3.1	0.69 U	6.1	10	12	6.9	6.1

Excess l

Notes:

Shaded values in Indoor air, Soil gas, or Outdoor Air indicate that the detected concentration exceeded the commercial/industrial risk-based value presented in Table 1.

Published Background is the NYSDOH background data base for homes in NYS (1997 - 2003) (NYSDOH, 2005)

The NYSDOH Guideline value is the Air Guideline Value (NYSDOH, 2005)

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

[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures. Risks are prsented for Office / Warehouse

[b] Risks for constituents detected in indoor air are calculated for each constituent denoted with a "Y" and summed to yield total cancer risk and hazard index values.

[c] Risks for constituents detected in indoor air > Outdoor air represent the incremental risk (risk for constituents detected in indoor air minus risk for constituents detected in outdoor air). Risks are presented f

[d] Risks for constituents with a potentially complete pathway are calculated for each constituent denoted with a "Y" and summed to yield total cancer risk and hazard index values. Risks are based on the high

[e] Risks for constituents with a potentially complete pathway and detected at average concentrations in excess of published background or maximum concentrations in excess of NYDOH screening values are

Y - Yes

N - No

-- Not applicable

Table 2
Pathway Completeness and Risk Analysis
American Recycle & Manufacturing (ARM)

Parameter	Units	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Average Indoor Air > Outdoor Air?	Average Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?	Pathway Potentially Complete & Indoor Air > Background or
1,1,1-Trichloroethane	ug/m3	<0.25 - 1.4		N			Y	N	N
1,1,2,2-Tetrachloroethane	ug/m3	<0.25		N			N	N	N
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3			N			Y	N	N
1,1,2-Trichloroethane	ug/m3	<0.25		N			N	N	N
1,1-Dichloroethane	ug/m3	<0.25		N			N	N	N
1,1-Dichloroethene	ug/m3	<0.25		N			N	N	N
1,2,4-Trichlorobenzene	ug/m3			N			N	N	N
1,2,4-Trimethylbenzene	ug/m3	0.78 - 4.4		Y	Y	N	Y	Y	N
1,2-Dibromoethane	ug/m3	<0.25		N			N	N	N
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3			N			N	N	N
1,2-Dichlorobenzene	ug/m3	<0.25		N			N	N	N
1,2-Dichloroethane	ug/m3	<0.25		N			N	N	N
1,2-Dichloroethene (total)	ug/m3			N			N	N	N
1,2-Dichloropropane	ug/m3	<0.25		N			N	N	N
1,3,5-Trimethylbenzene	ug/m3	<0.25 - 1.7		Y	Y	N	Y	Y	N
1,3-Dichlorobenzene	ug/m3	<0.25		N			N	N	N
1,4-Dichlorobenzene	ug/m3			N			N	N	N
1,4-Dioxane	ug/m3			N			N	N	N
2-Butanone	ug/m3			Y	Y	--	Y	Y	Y
2-Chlorotoluene	ug/m3			N			N	N	N
2-Hexanone	ug/m3			Y	Y	--	N	N	N
2-Propanol	ug/m3			Y	Y	--	Y	Y	Y
4-Ethyltoluene	ug/m3			Y	Y	--	Y	Y	Y
4-Methyl-2-pentanone	ug/m3			Y	Y	--	Y	Y	Y
Acetone	ug/m3	10 - 46		Y	Y	Y	Y	Y	Y
Allyl chloride	ug/m3			N			N	N	N
Benzene	ug/m3	1.2 - 5.7		Y	Y	N	Y	Y	N
Bromodichloromethane	ug/m3			N			N	N	N
Bromoform	ug/m3			N			N	N	N
Bromomethane	ug/m3	<0.25		N			N	N	N
Butadiene, 1,3-	ug/m3			Y	Y	--	Y	Y	Y
Carbon disulfide	ug/m3			Y	Y	--	Y	Y	Y
Carbon tetrachloride	ug/m3	<0.25 - 0.68		Y	N	N	Y	Y	N
Chlorobenzene	ug/m3	<0.25		N			N	N	N
Chlorodibromomethane	ug/m3			N			N	N	N
Chloroethane	ug/m3			N			N	N	N
Chloroform	ug/m3	<0.25 - 0.54		Y	Y	Y	Y	Y	Y
Chloromethane	ug/m3	<0.25 - 2.0		Y	N	N	N	N	N
Cis-1,2-Dichloroethene	ug/m3	<0.25		N			N	N	N
cis-1,3-Dichloropropene	ug/m3			N			N	N	N
Cyclohexane	ug/m3			Y	Y	--	Y	Y	Y
Dichlorodifluoromethane	ug/m3			Y	N	--	Y	Y	Y
Ethyl benzene	ug/m3	0.43 - 2.8		Y	Y	N	Y	Y	N
Heptane	ug/m3			Y	Y	--	Y	Y	Y
Hexachlorobutadiene	ug/m3			N			N	N	N
Hexane	ug/m3	0.63 - 6.5		Y	Y	N	Y	Y	N
Isooctane	ug/m3			Y	Y	--	N	N	N

Table 2
Pathway Completeness and Risk Analysis
American Recycle & Manufacturing (ARM)

Parameter	Units	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?		Average Indoor Air > Outdoor Air?	Average Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?		Pathway Potentially Complete & Indoor Air > Background or
Methyl Tertbutyl Ether	ug/m3	<0.25 - 6.7		N				N	N		N
Methylene chloride	ug/m3	0.38 - 6.3	60	Y		Y	N	Y	Y		N
o-Xylene	ug/m3	0.39 - 3.1		Y		Y	N	Y	Y		N
Styrene	ug/m3	<0.25 - 0.68		Y		Y	Y	Y	Y		Y
t-Butyl alcohol	ug/m3			N				N	N		N
Tetrachloroethene	ug/m3	<0.25 - 1.2	100	Y		Y	N	Y	Y		N
Tetrahydrofuran	ug/m3			N				N	N		N
Toluene	ug/m3	4.2 - 25		Y		Y	N	Y	Y		N
trans-1,2-Dichloroethene	ug/m3			N				N	N		N
trans-1,3-Dichloropropene	ug/m3			N				N	N		N
Trichloroethene	ug/m3	<0.25	5	Y		Y	N	N	N		N
Trichlorofluoromethane	ug/m3			Y		Y	--	Y	Y		N
Vinyl bromide	ug/m3			N				N	N		N
Vinyl chloride	ug/m3	<0.25		N				N	N		N
Xylene, m/p	ug/m3			Y		Y	--	Y	Y		Y
Xylenes, Total	ug/m3			Y		Y	--	Y	Y		Y
Lifetime Cancer Risk [a]				7E-06 / 2E-05	[b]	5E-06 / 1E-05	[c]		1E-05	[d]	5E-06 [e]
Hazard Index [a]				0.1 / 0.4	[b]	0.1 / 0.4	[c]		0.5	[d]	0.2 [e]

for Office / Warehou:
ıer of the EPCs for Office or Warehou
calculated for each constituent denoted with a "Y" and summed to yield total cancer risk and hazard index val

Table 3
Pathway Completeness and Risk Analysis
Firth Rixson

		Air Samples			Soil Gas Samples									
		F Rixson		Outdoor Air	F Rixson									
		IA-012	IA-013	OA-003	SG-199	SG-200								
		IA-06-FRX-012	IA-06-FRX-013	OA-06-FRX-003	SG-06-FRX-199	SG-06-FRX-200								
		03/29/06	03 29 06	03 29 06	03/29/06	03 29 06								
Parameter	Units	Sample	Sample	Sample	Sample	Sample	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Average Indoor Air > Outdoor Air?	Average Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?		Complete & Indoor Air > Background or Guideline Value?
1,1,1-Trichloroethane	ug/m3	0.87 U	0.87 U	0.87 U	3.7 U	2200	<0.25 - 1.4		N			Y	N		N
1,1,2,2-Tetrachloroethane	ug/m3	1.1 U	1.1 U	1.1 U	4.6 U	1.1 U	<0.25		N			N	N		N
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	1.2 U	1.2 U	1.2 U	5.1 U	1.2 U			N			N	N		N
1,1,2-Trichloroethane	ug/m3	0.87 U	0.87 U	0.87 U	3.7 U	0.87 U	<0.25		N			N	N		N
1,1-Dichloroethane	ug/m3	0.65 U	0.65 U	0.65 U	2.7 U	11	<0.25		N			Y	N		N
1,1-Dichloroethene	ug/m3	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U	<0.25		N			N	N		N
1,2,4-Trichlorobenzene	ug/m3	3 U	3 U	3 U	13 U	3 U			N			N	N		N
1,2,4-Trimethylbenzene	ug/m3	1.3	7.4	1	4.4	4.3	0.78 - 4.4		Y	Y	N	Y	Y		N
1,2-Dibromoethane	ug/m3	1.2 U	1.2 U	1.2 U	5.1 U	1.2 U	<0.25		N			N	N		N
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3	1.1 U	1.1 U	1.1 U	4.7 U	1.1 U			N			N	N		N
1,2-Dichlorobenzene	ug/m3	0.96 U	0.96 U	0.96 U	4 U	0.96 U	<0.25		N			N	N		N
1,2-Dichloroethane	ug/m3	0.65 U	0.65 U	0.65 U	2.7 U	0.65 U	<0.25		N			N	N		N
1,2-Dichloroethene (total)	ug/m3	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U			N			N	N		N
1,2-Dichloropropane	ug/m3	0.74 U	0.74 U	0.74 U	3.1 U	0.74 U	<0.25		N			N	N		N
1,3,5-Trimethylbenzene	ug/m3	0.79 U	2	0.79 U	3.3 U	1.3	<0.25 - 1.7		Y	Y	N	Y	Y		N
1,3-Dichlorobenzene	ug/m3	0.96 U	0.96 U	0.96 U	4 U	0.96 U	<0.25		N			N	N		N
1,4-Dichlorobenzene	ug/m3	26	0.96 U	0.96 U	10	0.96 U			Y	Y	--	Y	Y		Y
1,4-Dioxane	ug/m3	R	R	R	R	R			N			N	N		N
2-Butanone	ug/m3	1.2 U	1.2 U	1.2 U	10	3.8			N			Y	N		N
2-Chlorotoluene	ug/m3	0.83 U	0.83 U	0.83 U	3.5 U	0.83 U			N			N	N		N
2-Hexanone	ug/m3	1.6 U	1.6 U	1.6 U	7 U	1.6 U			N			N	N		N
2-Propanol	ug/m3	9.8 U	9.8 U	1.4 J	42 U	10			N			Y	N		N
4-Ethyltoluene	ug/m3	0.79 U	6.4	0.79 U	3.3 U	3.3			Y	Y	--	Y	Y		Y
4-Methyl-2-pentanone	ug/m3	1.6 U	1.6 U	1.6 U	7 U	1.8			N			Y	N		N
Acetone	ug/m3	23	310	9.5 U	97	55	10 - 46		Y	Y	Y	Y	Y		Y
Allyl chloride	ug/m3	1.3 U	1.3 U	1.3 U	5.3 U	1.3 U			N			N	N		N
Benzene	ug/m3	1.3	11	1.6	3.5	5.4	1.2 - 5.7		Y	Y	Y	Y	Y		Y
Bromodichloromethane	ug/m3	1.1 U	1.1 U	1.1 U	4.5 U	1.1 U			N			N	N		N
Bromoform	ug/m3	1.7 U	1.7 U	1.7 U	6.9 U	1.7 U			N			N	N		N
Bromomethane	ug/m3	0.62 U	0.62 U	0.62 U	2.6 U	0.62 U	<0.25		N			N	N		N
Butadiene, 1,3-	ug/m3	0.88 U	6.4	0.88 U	3.8 U	0.88 U			Y	Y	--	N	N		N
Carbon disulfide	ug/m3	1.2 U	1.2 U	1.2 U	9.3	3.4			N			Y	N		N
Carbon tetrachloride	ug/m3	0.69	1 U	0.69	4.2 U	1 U	<0.25 - 0.68		Y	N	N	N	N		N
Chlorobenzene	ug/m3	0.74 U	0.74 U	0.74 U	3.1 U	0.74 U	<0.25		N			N	N		N
Chlorodibromomethane	ug/m3	1.4 U	1.4 U	1.4 U	5.7 U	1.4 U			N			N	N		N
Chloroethane	ug/m3	1.1 U	1.1 U	1.1 U	4.5 U	1.1 U			N			N	N		N
Chloroform	ug/m3	0.78 U	0.78 U	0.78 U	3.3 U	4.2	<0.25 - 0.54		N			Y	N		N
Chloromethane	ug/m3	1.6	1.2	1.7	3.5 U	0.83 U	<0.25 - 2.0		Y	N	N	N	N		N
Cis-1,2-Dichloroethene	ug/m3	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U	<0.25		N			N	N		N
cis-1,3-Dichloropropene	ug/m3	0.73 U	0.73 U	0.73 U	3 U	0.73 U			N			N	N		N
Cyclohexane	ug/m3	0.55 U	1	0.55 U	6.9	210 J			Y	Y	--	Y	Y		Y
Dichlorodifluoromethane	ug/m3	6.9	3.2	3.2	8.4 U	2.3			Y	Y	--	Y	Y		Y
Ethyl benzene	ug/m3	0.78	6.1	0.83	3.8	4	0.43 - 2.8		Y	Y	Y	Y	Y		Y
Heptane	ug/m3	0.98	2.3	0.98	7	5.3			Y	Y	--	Y	Y		Y
Hexachlorobutadiene	ug/m3	1.7 U	1.7 U	1.7 U	7.1 U	1.7 U			N			N	N		N
Hexane	ug/m3	1.4 U	6.3	2.3	6 U	11	0.63 - 6.5		Y	Y	N	Y	Y		N
Isooctane	ug/m3	0.93	5.1	2	3.1 U	1.1			Y	Y	--	Y	Y		N
Methyl Tertbutyl Ether	ug/m3	1.4 U	1.4 U	1.4 U	6.1 U	1.4 U	<0.25 - 6.7		N			N	N		N
Methylene chloride	ug/m3	1.4 U	1.4 U	1.4 U	5.9 U	1.4 U	0.38 - 6.3	60	N			N	N		N
o-Xylene	ug/m3	0.96	6.9	1	3.8	4.1	0.39 - 3.1		Y	Y	Y	Y	Y		Y
Styrene	ug/m3	0.68 U	1.7	0.68 U	2.8 J	1.8	<0.25 - 0.68		Y	Y	Y	Y	Y		Y
t-Butyl alcohol	ug/m3	12 U	12 U	12 U	52 U	12 U			N			N	N		N
Tetrachloroethene	ug/m3	1.1 U	1.1 U	1.1 U	4.9	28	<0.25 - 1.2	100	N			Y	N		N
Tetrahydrofuran	ug/m3	12 U	12 U	12 U	50 U	12 U			N			N	N		N
Toluene	ug/m3	5.7	140	6	57	75	4.2 - 25		Y	Y	Y	Y	Y		Y

6/21/2006
Prepared by: KJC
Checked by: JHP

Table 3
Pathway Completeness and Risk Analysis
Firth Rixson

		Air Samples			Soil Gas Samples									
		F Rixson		Outdoor Air	F Rixson									
		IA-012	IA-013	OA-003	SG-199	SG-200								
		IA-06-FRX-012	IA-06-FRX-013	OA-06-FRX-003	SG-06-FRX-199	SG-06-FRX-200								
		03/29/06	03/29/06	03/29/06	03/29/06	03/29/06								
Parameter	**Units**	Sample	Sample	Sample	Sample	Sample	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Average Indoor Air > Outdoor Air?	Average Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?		Complete & Indoor Air > Background or Guideline Value?
trans-1,2-Dichloroethene	ug/m3	0.63 U	0.63 U	0.63 U	2.7 U	0.63 U			N			N	N		N
trans-1,3-Dichloropropene	ug/m3	0.73 U	0.73 U	0.73 U	3 U	0.73 U			N			N	N		N
Trichloroethene	ug/m3	0.21 U	0.86 U	0.21 U	3.6 U	2.8	<0.25	5	N			Y	N		N
Trichlorofluoromethane	ug/m3	1.8	1.6	1.6	3.8 U	2.2			Y	Y	--	Y	Y		Y
Vinyl bromide	ug/m3	0.7 U	0.7 U	0.7 U	2.9 U	0.7 U			N			N	N		N
Vinyl chloride	ug/m3	0.41 U	0.41 U	0.41 U	1.7 U	0.41 U	<0.25		N			N	N		N
Xylene, m/p	ug/m3	2.6	20	2.3	8.7	11			Y	Y	--	Y	Y		Y
Xylenes, Total	ug/m3	3.6	28	3.4	13	16			Y	Y	--	Y	Y		Y
							Excess Lifetime Cancer Risk [a]		1E-05 / 2E-05	8E-06 / 2E-05	[c]		2E-05	[d]	2E-05
							Hazard Index [a]		0.09 / 1	0.02 / 0.9	[c]		0.5	[d]	0.2

Notes:

Shaded values in Indoor air, Soil gas, or Outdoor Air indicate that the detected concentration exceeded the commercial/industrial risk-based value presented in Table 1.

Published Background is the NYSDOH background data base for homes in NYS (1997 - 2003) (NYSDOH, 2005)

The NYSDOH Guideline value is the Air Guideline Value (NYSDOH, 2005)

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

[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures. Risks are presented for Office / Shipping

[b] Risks for constituents detected in indoor air are calculated for each constituent denoted with a "Y" and summed to yield total cancer risk and hazard index values.

[c] Risks for constituents detected in indoor air > Outdoor air represent the incremental risk (risk for constituents detected in indoor air minus risk for constituents detected in outdoor air). Risks are presented for Office / Shipping

[d] Risks for constituents with a potentially complete pathway are calculated for each constituent denoted with a "Y" and summed to yield total cancer risk and hazard index values. Risks are based on the higher of the EPCs for Office or Warehouse.

[e] Risks for constituents with a potentially complete pathway and detected at average concentrations in excess of published background or maximum concentrations in excess of NYDOH screening values are calculated for each constituent denoted with a "Y" and summed to yield total cancer risk and hazard

Y - Yes

N - No

-- Not applicable

APPENDIX A

FIELD DATA RECORDS

Site Location: ARCH Chemical, Rochester, N.Y.			Sampled By: Wolfgang Calicchio			
Project Number: 3616036009.01			Sampling Date: 3/29/06			
Sample ID	Sampling Location	Start Time	End Time	Total Sample Time	Canister Start Pressure (in. Hg)	Canister End Pressure (in. Hg)
Flow controller						
4605 IA-06-ARM-007	Location 1 can 2903	0720	1554	Hrs. mins.	-31.1	-2.1
2761 SG-06-ARM-194	Location 1 can 3159	0720	1551	Hrs. mins.	-31.2	-3.5
3103 IA-06-ARM-008	Location 2 can 2552	0727	1557	Hrs. mins.	-31.2	-3.3
2775 SG-06-ARM-195	Location 2 can 4006	0727	1610	Hrs. mins.	-31.3	-5.4
2933 IA-06-ARM-009	Location 3 can 4157	0730	1630	Hrs. mins.	-30.9	-19.5
2589 SG-06-ARM-196	Location 3 can 2958	0730	1630	Hrs. mins.	-30.9	-9.0
3716 IA-06-ARM-010	Location 4 can 2781	0738	1335	Hrs. mins.	-30.9	0.0
3413 SG-06-ARM-197	Location 4 can 2661	0738	1602	Hrs. mins.	-31.0	-4.2
3132 IA-06-ARM-011	Location 5 can 4088	0742	1624	Hrs. mins.	-31.0	-2.9
3744 SG-06-ARM-198	Location 5 can 4125	0742	1624	Hrs. mins.	-31.0	-2.4
3807 OA-06-ARM-002	Background can 2457	0749	1702	Hrs. mins.	-31.0	-2.1
				Hrs. mins.		
				Hrs. mins.		
				Hrs. mins.		
				Hrs. mins.		
				Hrs. mins.		
				Hrs. mins.		
				Hrs. mins.		
Comments:						

	Site Location: ARCH Chemical, Rochester, N.Y.				**Sampled By: Wolfgang Calicchio**			
	Project Number: 3616036009.01				**Sampling Date:** 3/29/06			
	Sample ID	**Sampling Location**		**Start Time**	**End Time**	**Total Sample Time**	**Canister Start Pressure (in. Hg)**	**Canister End Pressure (in. Hg)**
2818	IA-06-FRX-012	Location 1 can	2709	0809	1100	Hrs. mins.	-30.9	-0.4
3239	SG-06-FRX-199	Location 1 can	3927	0809	1645	Hrs. mins.	-31.0	-25.9
3354	IA-06-FRX-013	Location 2 can	3236	0812	1640	Hrs. mins.	-30.9	-3.4
2837	SG-06-FRX-200	Location 2 can	2672	0812	1640	Hrs. mins.	-30.8	-2.5
2826	OA-06-FRX-003	Background can	3201	0816	1700	Hrs. mins.	-30.6	-4.8
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
						Hrs. mins.		
	Comments:							

SEVERN TRENT STL®

SEVERN TRENT LABORATORIES, INC.

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446 Tel 802 655 1203

CHAIN OF CUSTODY RECORD

Report to:	Invoice to:
Company: MALTEC	Company: MALTEC ATLANTIC PARADISE
Address: 511 Congress St. Portland, ME 04112	Address: Alpharetta, GA
Contact: JEFF BRANDOW	Contact:
Phone: (207) 775-5401	Phone:
Fax: (207) 772-4762	Fax:
Contract/ Quote: PROJECT # 36016.09 36009.01	

ANALYSIS REQUESTED: TO-15

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: WOLFGANG CALICCHIO

Sampler's Signature:

Proj. No.: 36016.09.01

Project Name: ARCH SOIL VAPOR

No/Type of Containers²: 10/P/O

Matrix¹	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	Lab/Sample ID (Lab Use Only)
A	3/29	1554	✓		IA-06-ARM-007				1	X
A	3/29	1551	✓		SG-06-ARM-194				1	X
A	3/29	1557	✓		IA-06-ARM-008				1	X
A	3/29	1610	✓		SG-06-ARM-195				1	X
A	3/29	1630	✓		IA-06-ARM-009				1	X
A	3/29	1630	✓		SG-06-ARM-196				1	X
A	3/29	1335	✓		IA-06-ARM-010				1	X
A	3/29	1602	✓		SG-06-ARM-197				1	X
A	3/29	1624	✓		IA-06-ARM-011				1	X
A	3/29	1624	✓		SG-06-ARM-198				1	X

Relinquished by: (Signature)	Date	Time	Received by: (Signature	Date	Time	Remarks
	1745					
Relinquished by: (Signature)	Date	Time	Received by: (Signature	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature	Date	Time	Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.

¹Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil

²Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other 66 Summa

STL cannot accept verbal changes. Please Fax written changes to (802) 655-1248

STL8234-200 (12/02)

SEVERN TRENT STL®

SEVERN TRENT LABORATORIES, INC.

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446 Tel 802 655 1203

CHAIN OF CUSTODY RECORD

Report to:	Invoice to:
Company: MACTEC	Company: MACTEC Accounts Payable
Address: 511 Congress Str. Portland, ME 04112	Address: Alpharetta GA
Contact: JEFF BRANNON	Contact:
Phone: (207) 775-5401	Phone:
Fax: (207) 772-4762	Fax:
Contract/ Project #:	
Quote: 361603609.01	

Sampler's Name: Wolfgang Calicchio

Sampler's Signature:

Proj. No.: 361603609.01

Project Name: ARCH SOIL VAPOR

No/Type of Containers²: 6/P/O

ANALYSIS REQUESTED: TO-15

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Matrix¹	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	TO-15	Lab/Sample ID (Lab Use Only)
A	3/24	1702	✓		OA-06-ARM-002				1	X	
A	3/24	1100	✓		IA-06-FRX-012				1	X	
A	3/24	1645	✓		SG-06-FRX-199				1	X	
A	3/24	1640	✓		IA-06-FRX-013				1	X	
A	3/24	1640	✓		SG-06-FRX-200				1	X	
A	3/24	1700	✓		OA-06-FRX-003				1	X	

Relinquished by: (Signature)	Date	Time	Received by: (Signature	Date	Time
	3/24/06	1745			
Relinquished by: (Signature)	Date	Time	Received by: (Signature	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.

¹Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil

²Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other 6L Summa

STL cannot accept verbal changes. Please Fax written changes to (802) 655-1248

STL8234-200 (12/02)

APPENDIX B

METEROLOGICAL DATA

www.crh.noaa.gov

Weather observations for the past 72 hours

Greater Rochester International Airport

Enter Your "City, ST" Go

Date	Time (est)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Temperature (°F)				Pressure		Precipitation		
						Air	Dwpt	6 hour Max.	6 hour Min.	altimeter (in)	sea level (mb)	1 hr	3 hr	6 hr
30	06:54	SW 7	8.00	Mostly Cloudy	FEW095 BKN250	35	29	38	32	30.31	1026.7			
30	05:54	SW 5	9.00	Mostly Cloudy	SCT090 BKN250	33	27			30.29	1026.1			
30	04:54	S 6	9.00	Fair	CLR	34	27			30.29	1026.1			
30	03:54	SW 6	8.00	Fair	CLR	32	26			30.28	1025.8			
30	02:54	SW 6	8.00	Fair	CLR	33	28			30.28	1025.9			
30	01:54	SW 3	10.00	Fair	CLR	36	27			30.29	1026.1			
30	00:54	Calm	10.00	Fair	CLR	38	27	51	37	30.30	1026.3			
29	23:54	SW 6	10.00	Fair	CLR	38	28			30.30	1026.2			
29	22:54	SW 5	10.00	Fair	CLR	39	28			30.29	1026.0			
29	21:54	SW 6	10.00	Fair	CLR	39	28			30.29	1026.1			
29	20:54	Calm	10.00	Fair	CLR	42	27			30.28	1025.7			
29	19:54	Calm	10.00	Fair	CLR	45	26			30.27	1025.4			
29	18:54	Calm	10.00	A Few Clouds	FEW200	51	24	57	51	30.25	1025.0			
29	17:54	NW 8	10.00	A Few Clouds	FEW200	52	25			30.26	1025.0			
29	16:54	N 10	10.00	A Few Clouds	FEW200	54	25			30.25	1024.8			
29	15:54	N 12	10.00	A Few Clouds	FEW250	57	26			30.25	1024.8			
29	14:54	N 10	10.00	A Few Clouds	FEW250	57	25			30.26	1025.0			
29	13:54	N 12	10.00	A Few Clouds	FEW250	56	24			30.27	1025.4			
29	12:54	N 12	10.00	A Few Clouds	FEW250	56	25	57	32	30.28	1025.7			
29	11:54	Vrbl 7	10.00	A Few Clouds	FEW250	56	24			30.28	1025.8			
29	10:54	Vrbl 3	10.00	A Few Clouds	FEW250	54	24			30.29	1026.0			
29	09:54	E 3	10.00	A Few Clouds	FEW250	50	22			30.30	1026.3			
29	08:54	S 3	10.00	A Few Clouds	FEW250	44	28			30.29	1026.2			
29	07:54	SW 5	10.00	Partly Cloudy	FEW020 SCT100 SCT250	37	29			30.30	1026.4			
29	06:54	Calm	9.00	Partly Cloudy	FEW015 SCT095	32	26	32	27	30.27	1025.5			
29	05:54	Calm	9.00	Partly Cloudy	FEW180 SCT250	28	25			30.24	1024.7			
29	04:54	S 3	10.00	A Few Clouds	FEW200	30	23			30.23	1024.1			
29	03:54	S 3	10.00	Partly Cloudy	FEW170 SCT250	30	23			30.22	1023.7			
29	02:54	SW 3	10.00	A Few Clouds	FEW250	30	25			30.22	1023.8			

29	01:54	S 3	10.00	Fair	CLR	31	27			30.21	1023.3
29	00:54	SW 3	10.00	Fair	CLR	31	26	44	31	30.21	1023.5
28	23:54	S 3	10.00	Fair	CLR	33	25			30.20	1023.0
28	22:54	SW 3	10.00	Fair	CLR	34	23			30.19	1022.9
28	21:54	Calm	9.00	Fair	CLR	37	23			30.19	1022.8
28	20:54	Calm	10.00	Fair	CLR	41	22			30.19	1022.7
28	19:54	NE 5	10.00	Fair	CLR	44	22			30.18	1022.5
28	17:54	N 12	10.00	Partly Cloudy	SCT200	48	22			30.16	1021.6
28	16:54	NE 12	10.00	Mostly Cloudy	BKN200	50	23			30.15	1021.3
28	15:54	N 15	10.00	Mostly Cloudy	FEW060 BKN250	52	23			30.15	1021.4
28	14:54	N 16	10.00	Mostly Cloudy	FEW060 BKN250	53	23			30.15	1021.6
28	13:54	N 14	10.00	Mostly Cloudy	FEW055 BKN250	55	25			30.16	1021.7
28	12:54	E 9	10.00	Mostly Cloudy	FEW055 BKN250	53	21	54	33	30.18	1022.2
28	11:54	S 5	10.00	Mostly Cloudy	FEW025 BKN220	52	21			30.19	1022.8
28	10:54	Vrbl 5	10.00	Mostly Cloudy	FEW020 BKN220	50	23			30.21	1023.4
28	09:54	S 6	10.00	Mostly Cloudy	BKN220	46	25			30.22	1024.0
28	08:54	S 6	10.00	Mostly Cloudy	BKN220	41	24			30.23	1024.1
28	07:54	S 5	10.00	Mostly Cloudy	BKN220	35	24			30.23	1024.1
28	06:54	Calm	10.00	Mostly Cloudy	BKN220	33	22	33	30	30.23	1024.1
28	05:54	SW 6	10.00	Mostly Cloudy	BKN250	32	21			30.21	1023.6
28	04:54	SW 8	10.00	Mostly Cloudy	BKN250	31	22			30.21	1023.5
28	03:54	SW 6	10.00	Mostly Cloudy	BKN250	32	22			30.20	1023.3
28	02:54	SW 6	10.00	Mostly Cloudy	BKN200	31	22			30.21	1023.3
28	01:54	SW 6	10.00	Mostly Cloudy	BKN220	30	20			30.22	1023.8
28	00:54	SW 6	10.00	A Few Clouds	FEW250	32	19	45	32	30.22	1023.7
27	23:54	SW 6	10.00	Fair	CLR	33	19			30.22	1023.8
27	22:54	SW 6	10.00	Fair	CLR	36	18			30.22	1023.7
27	21:54	W 7	10.00	Fair	CLR	38	19			30.22	1023.9
27	20:54	W 6	10.00	Fair	CLR	40	20			30.22	1023.9
27	19:54	W 7	10.00	Fair	CLR	43	21			30.22	1023.7
27	18:54	W 7	10.00	Mostly Cloudy	BKN180	46	19	53	46	30.20	1023.2
27	17:54	N 7	10.00	Mostly Cloudy	BKN200	48	16			30.20	1023.1
27	16:54	NW 15 G 22	10.00	Mostly Cloudy	FEW055 BKN200	51	15			30.21	1023.3
27	15:54	NW 13 G 21	10.00	Overcast	FEW055 OVC250	51	19			30.21	1023.6
27	14:54	NW 14 G 22	10.00	Mostly Cloudy	FEW050 BKN250	52	22			30.22	1023.8
27	13:54	NW 9	10.00	Mostly Cloudy	FEW050 BKN250	52	23			30.23	1024.0
27	12:54	NW 9	10.00	Partly Cloudy	FEW045 SCT250	51	22	51	32	30.25	1024.6

27	11:54	W 10	10.00	A Few Clouds	FEW250	48	21			30.26	1025.1			
27	10:54	N 5	10.00	A Few Clouds	FEW250	46	22			30.28	1025.8			
27	09:54	NW 10	10.00	A Few Clouds	FEW250	43	23			30.29	1026.1			
27	08:54	W 10	10.00	A Few Clouds	FEW250	40	24			30.28	1025.7			
27	07:54	W 12	10.00	A Few Clouds	FEW250	36	24			30.27	1025.6			
27	06:54	W 8	10.00	A Few Clouds	FEW250	32	23	34	27	30.25	1024.8			
Date	Time (est)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Air	Dwpt	Max.	Min.	altimeter (in)	sea level (mb)	1 hr	3 hr	6 hr
								6 hour						
						Temperature (°F)				Pressure		Precipitation		

National Weather Service
Central Region Headquarters
Kansas City, Missouri
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APPENDIX C

LABORATORY ANALYTICAL REPORT

SEVERN TRENT STL®

STL Burlington
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Colchester, VT 05446

Tel: 802 655 1203 Fax: 802 655 1248
www.stl-inc.com

April 13, 2006

Mr. Jeff Brandow
MACTEC Engineering & Consulting
511 Congress Street
Portland, ME 04101

Re: Laboratory Project No. 26000
Case: 26000; SDG: 113466

Dear Mr. Brandow:

Enclosed are the analytical results for the samples that were received by STL Burlington on March 30th, 2006. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 03/30/06 ETR No: 113466		
663531	IA-06-ARM-007	03/29/06	AIR
663532	SG-06-ARM-194	03/29/06	AIR
663532DP	SG-06-ARM-194REP	03/29/06	AIR
663533	IA-06-ARM-008	03/29/06	AIR
663534	SG-06-ARM-195	03/29/06	AIR
663535	IA-06-ARM-009	03/29/06	AIR
663536	SG-06-ARM-196	03/29/06	AIR
663537	IA-06-ARM-010	03/29/06	AIR
663538	SG-06-ARM-197	03/29/06	AIR
663539	IA-06-ARM-011	03/29/06	AIR
663540	SG-06-ARM-198	03/29/06	AIR
663541	OA-06-ARM-002	03/29/06	AIR
663542	IA-06-FRX-012	03/29/06	AIR
663543	SG-06-FRX-199	03/29/06	AIR
663544	IA-06-FRX-013	03/29/06	AIR
663545	SG-06-FRX-200	03/29/06	AIR
663546	OA-06-FRX-003	03/29/06	AIR

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal.

The samples in this delivery group were analyzed using the laboratory's standard TO-15 method. Per the client's instructions, all indoor and outdoor air samples were re-analyzed for Trichloroethene and Carbon Tetrachloride where possible, using the low level TO-15 method, in order to achieve lower reporting limits.

The original analyses for samples IA-06-ARM-008, IA-06-FRX-013, and SG-06-FRX-200 yielded concentrations of target analytes that exceeded the calibrated range. These samples were diluted and re-analyzed yielding acceptable results. The results from both analyses have been formally presented.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 655-1203.

Sincerely,

Don Dawicki
Project Manager

Enclosure

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-007

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663531

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.92		0.40	4.5		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	23		0.16	130		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	13		4.0	31		9.5
Isopropyl Alcohol	67-63-0	11		4.0	27		9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	1.5		0.40	5.2		1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.40		0.40	1.4		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.52		0.40	1.5		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.20		0.16	0.98		0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.52		0.16	1.8		0.55
Carbon Tetrachloride	56-23-5	~~0.16~~	~~U~~	~~0.16~~	~~1.0~~	~~U~~	~~1.0~~ *
2,2,4-Trimethylpentane	540-84-1	0.17		0.16	0.79		0.75
Benzene	71-43-2	0.39		0.16	1.2		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.26		0.16	1.1		0.66

* Combine with low level analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-007

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663531

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	R 14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.83		0.40	3.4		1.6
Toluene	108-88-3	2.8		0.16	11		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.33		0.16	2.2		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.20		0.16	0.87		0.69
Xylene (m,p)	1330-20-7	0.52		0.40	2.3		1.7
Xylene (o)	95-47-6	0.19		0.16	0.83		0.69
Xylene (total)	1330-20-7	0.74		0.16	3.2		0.69
Styrene	100-42-5	0.16	U	0.16	0.68	U	0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.16	U	0.16	0.79	U	0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.24		0.16	1.2		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

4 Compounds with low level analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-007RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663531R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.11		0.040	0.69		0.25
Trichloroethene *	79-01-6	0.047		0.040	0.25		0.21

* combined with organic analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-009

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663535

Date Analyzed: 04/11/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	1.2	U	1.2	5.9	U	5.9
1,2-Dichlorotetrafluoroethane	76-14-2	0.48	U	0.48	3.4	U	3.4
Chloromethane	74-87-3	1.2	U	1.2	2.5	U	2.5
Vinyl Chloride	75-01-4	0.48	U	0.48	1.2	U	1.2
1,3-Butadiene	106-99-0	1.5		1.2	3.3		2.7
Bromomethane	74-83-9	0.48	U	0.48	1.9	U	1.9
Chloroethane	75-00-3	1.2	U	1.2	3.2	U	3.2
Bromoethene	593-60-2	0.48	U	0.48	2.1	U	2.1
Trichlorofluoromethane	75-69-4	10		0.48	56		2.7
Freon TF	76-13-1	0.48	U	0.48	3.7	U	3.7
1,1-Dichloroethene	75-35-4	0.48	U	0.48	1.9	U	1.9
Acetone	67-64-1	44		12	100		29
Isopropyl Alcohol	67-63-0	12	U	12	29	U	29
Carbon Disulfide	75-15-0	1.2	U	1.2	3.7	U	3.7
3-Chloropropene	107-05-1	1.2	U J	1.2	3.8	U J	3.8
Methylene Chloride	75-09-2	3.1		1.2	11		4.2
tert-Butyl Alcohol	75-65-0	12	U	12	36	U	36
Methyl tert-Butyl Ether	1634-04-4	1.2	U	1.2	4.3	U	4.3
trans-1,2-Dichloroethene	156-60-5	0.48	U	0.48	1.9	U	1.9
n-Hexane	110-54-3	1.2	U	1.2	4.2	U	4.2
1,1-Dichloroethane	75-34-3	0.48	U	0.48	1.9	U	1.9
1,2-Dichloroethene (total)	540-59-0	0.48	U	0.48	1.9	U	1.9
Methyl Ethyl Ketone	78-93-3	1.5		1.2	4.4		3.5
cis-1,2-Dichloroethene	156-59-2	0.48	U	0.48	1.9	U	1.9
Tetrahydrofuran	109-99-9	12	U	12	35	U	35
Chloroform	67-66-3	0.48	U	0.48	2.3	U	2.3
1,1,1-Trichloroethane	71-55-6	0.48	U	0.48	2.6	U	2.6
Cyclohexane	110-82-7	1.1		0.48	3.8		1.7
Carbon Tetrachloride	56-23-5	0.48	U	0.48	3.0	U	3.0
2,2,4-Trimethylpentane	540-84-1	0.48	U	0.48	2.2	U	2.2
Benzene	71-43-2	0.85		0.48	2.7		1.5
1,2-Dichloroethane	107-06-2	0.48	U	0.48	1.9	U	1.9
n-Heptane	142-82-5	0.95		0.48	3.9		2.0

* Combined with low level analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-009

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663535

Date Analyzed: 04/11/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.48	U	0.48	2.6	U	2.6
1,2-Dichloropropane	78-87-5	0.48	U	0.48	2.2	U	2.2
1,4-Dioxane	123-91-1	12	U	12	43	U	43
Bromodichloromethane	75-27-4	0.48	U	0.48	3.2	U	3.2
cis-1,3-Dichloropropene	10061-01-5	0.48	U	0.48	2.2	U	2.2
Methyl Isobutyl Ketone	108-10-1	1.2	U	1.2	4.9	U	4.9
Toluene	108-88-3	3.4		0.48	13		1.8
trans-1,3-Dichloropropene	10061-02-6	0.48	U	0.48	2.2	U	2.2
1,1,2-Trichloroethane	79-00-5	0.48	U	0.48	2.6	U	2.6
Tetrachloroethene	127-18-4	1.1		0.48	7.5		3.3
Methyl Butyl Ketone	591-78-6	1.2	U	1.2	4.9	U	4.9
Dibromochloromethane	124-48-1	0.48	U	0.48	4.1	U	4.1
1,2-Dibromoethane	106-93-4	0.48	U	0.48	3.7	U	3.7
Chlorobenzene	108-90-7	0.48	U	0.48	2.2	U	2.2
Ethylbenzene	100-41-4	0.48	U	0.48	2.1	U	2.1
Xylene (m,p)	1330-20-7	1.2	U	1.2	5.2	U	5.2
Xylene (o)	95-47-6	0.48	U	0.48	2.1	U	2.1
Xylene (total)	1330-20-7	0.48	U	0.48	2.1	U	2.1
Styrene	100-42-5	0.48	U	0.48	2.0	U	2.0
Bromoform	75-25-2	0.48	U	0.48	5.0	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	0.48	U	0.48	3.3	U	3.3
4-Ethyltoluene	622-96-8	0.48	U	0.48	2.4	U	2.4
1,3,5-Trimethylbenzene	108-67-8	0.48	U	0.48	2.4	U	2.4
2-Chlorotoluene	95-49-8	0.48	U	0.48	2.5	U	2.5
1,2,4-Trimethylbenzene	95-63-6	0.48	U	0.48	2.4	U	2.4
1,3-Dichlorobenzene	541-73-1	0.48	U	0.48	2.9	U	2.9
1,4-Dichlorobenzene	106-46-7	0.48	U	0.48	2.9	U	2.9
1,2-Dichlorobenzene	95-50-1	0.48	U	0.48	2.9	U	2.9
1,2,4-Trichlorobenzene	120-82-1	1.2	U	1.2	8.9	U	8.9
Hexachlorobutadiene	87-68-3	0.48	U	0.48	5.1	U	5.1

* combine with low level analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-009RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663535R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.10		0.040	0.63		0.25
Trichloroethene *	79-01-6	0.062		0.040	0.33		0.21

* reanalysis with original analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-196

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663536

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.80		0.40	4.0		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.82		0.40	1.8		0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	4.6		0.16	26		0.90
Freon TF	76-13-1	1.1		0.16	8.4		1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	9.5		4.0	23		9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	1.8		0.40	5.6		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.80		0.40	2.8		1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	4.6		0.40	16		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.1		0.40	3.2		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.24		0.16	1.2		0.78
1,1,1-Trichloroethane	71-55-6	0.23		0.16	1.3		0.87
Cyclohexane	110-82-7	2.6		0.16	8.9		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	1.5		0.16	4.8		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	2.6		0.16	11		0.66

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-196

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663536

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	8.3		0.16	31		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	1.0		0.16	6.8		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.62		0.16	2.7		0.69
Xylene (m,p)	1330-20-7	1.9		0.40	8.3		1.7
Xylene (o)	95-47-6	0.79		0.16	3.4		0.69
Xylene (total)	1330-20-7	2.8		0.16	12		0.69
Styrene	100-42-5	0.62		0.16	2.6		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.58		0.16	2.9		0.79
1,3,5-Trimethylbenzene	108-67-8	0.17		0.16	0.84		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.75		0.16	3.7		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-010

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663537

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.72		0.40	3.6		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.94		0.40	1.9		0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.80		0.40	1.8		0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.39		0.16	2.2		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	14		4.0	33		9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.77		0.40	2.7		1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.64		0.40	2.3		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.3		0.40	3.8		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.33		0.16	1.1		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0 *
2,2,4-Trimethylpentane	540-84-1	0.39		0.16	1.8		0.75
Benzene	71-43-2	0.91		0.16	2.9		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.35		0.16	1.4		0.66

* Confirmed with low level analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-010

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663537

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86 *
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	2.5		0.16	9.4		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	1.6		0.16	11		1.1
Methyl Butyl Ketone	591-78-6	2.9		0.40	12		1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.33		0.16	1.4		0.69
Xylene (m,p)	1330-20-7	0.92		0.40	4.0		1.7
Xylene (o)	95-47-6	0.39		0.16	1.7		0.69
Xylene (total)	1330-20-7	1.4		0.16	6.1		0.69
Styrene	100-42-5	0.60		0.16	2.6		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.72		0.16	3.5		0.79
1,3,5-Trimethylbenzene	108-67-8	0.25		0.16	1.2		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.82		0.16	4.0		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

* combine with 2nd set analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-010RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663537R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.11		0.040	0.69		0.25
Trichloroethene *	79-01-6	0.060		0.040	0.32		0.21

* Confirm with original analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-194

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663532

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.64		0.40	3.2		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	7.8		0.16	44		0.90
Freon TF	76-13-1	5.0		0.16	38		1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	4.0	U	4.0	9.5	U	9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	1.0		0.40	3.1		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.40	U	0.40	1.4	U	1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.40	U	0.40	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.20		0.16	0.69		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	0.16	U	0.16	0.51	U	0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.16	U	0.16	0.66	U	0.66

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-194

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663532

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	2.4		0.16	9.0		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.28		0.16	1.9		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.27		0.16	1.2		0.69
Xylene (m,p)	1330-20-7	0.90		0.40	3.9		1.7
Xylene (o)	95-47-6	0.49		0.16	2.1		0.69
Xylene (total)	1330-20-7	1.4		0.16	6.1		0.69
Styrene	100-42-5	0.24		0.16	1.0		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.53		0.16	2.6		0.79
1,3,5-Trimethylbenzene	108-67-8	0.27		0.16	1.3		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.76		0.16	3.7		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-194REP

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663532DP

Date Analyzed: 04/11/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.72		0.40	3.6		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	9.3		0.16	52		0.90
Freon TF	76-13-1	6.0		0.16	46		1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	4.0	U	4.0	9.5	U	9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	1.1		0.40	3.4		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.40	U	0.40	1.4	U	1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.49		0.40	1.4		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.18		0.16	0.62		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	0.16	U	0.16	0.51	U	0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.16	U	0.16	0.66	U	0.66

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-194REP

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663532DP

Date Analyzed: 04/11/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U R	4.0	14	U R	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	3.0		0.16	11		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.31		0.16	2.1		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.31		0.16	1.3		0.69
Xylene (m,p)	1330-20-7	0.99		0.40	4.3		1.7
Xylene (o)	95-47-6	0.49		0.16	2.1		0.69
Xylene (total)	1330-20-7	1.5		0.16	6.5		0.69
Styrene	100-42-5	0.22		0.16	0.94		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.58		0.16	2.9		0.79
1,3,5-Trimethylbenzene	108-67-8	0.29		0.16	1.4		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.84		0.16	4.1		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U J	0.16	1.7	U J	1.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-008

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663533

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.58		0.40	2.9		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.58		0.40	1.3		0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	25		0.16	140		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone *	67-64-1	39	E	4.0	93	E	9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	0.69		0.40	2.1		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	6.2		0.40	22		1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.64		0.40	2.3		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.4		0.40	4.1		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	2.3		0.16	7.9		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.22		0.16	1.0		0.75
Benzene	71-43-2	0.67		0.16	2.1		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.52		0.16	2.1		0.66

* combine with dilution analysis result.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-008DL

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663533D1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.80	U	0.80	4.0	U	4.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.32	U	0.32	2.2	U	2.2
Chloromethane	74-87-3	0.80	U	0.80	1.7	U	1.7
Vinyl Chloride	75-01-4	0.32	U	0.32	0.82	U	0.82
1,3-Butadiene	106-99-0	0.80	U	0.80	1.8	U	1.8
Bromomethane	74-83-9	0.32	U	0.32	1.2	U	1.2
Chloroethane	75-00-3	0.80	U	0.80	2.1	U	2.1
Bromoethene	593-60-2	0.32	U	0.32	1.4	U	1.4
Trichlorofluoromethane	75-69-4	27	D	0.32	150	D	1.8
Freon TF	76-13-1	0.32	U	0.32	2.5	U	2.5
1,1-Dichloroethene	75-35-4	0.32	U	0.32	1.3	U	1.3
Acetone *	67-64-1	45	D	8.0	110	D	19
Isopropyl Alcohol	67-63-0	8.0	U	8.0	20	U	20
Carbon Disulfide	75-15-0	0.85	D	0.80	2.6	D	2.5
3-Chloropropene	107-05-1	0.80	U	0.80	2.5	U	2.5
Methylene Chloride	75-09-2	7.2	D	0.80	25	D	2.8
tert-Butyl Alcohol	75-65-0	8.0	U	8.0	24	U	24
Methyl tert-Butyl Ether	1634-04-4	0.80	U	0.80	2.9	U	2.9
trans-1,2-Dichloroethene	156-60-5	0.32	U	0.32	1.3	U	1.3
n-Hexane	110-54-3	0.80	D	0.80	2.8	D	2.8
1,1-Dichloroethane	75-34-3	0.32	U	0.32	1.3	U	1.3
1,2-Dichloroethene (total)	540-59-0	0.32	U	0.32	1.3	U	1.3
Methyl Ethyl Ketone	78-93-3	1.4	D	0.80	4.1	D	2.4
cis-1,2-Dichloroethene	156-59-2	0.32	U	0.32	1.3	U	1.3
Tetrahydrofuran	109-99-9	8.0	U	8.0	24	U	24
Chloroform	67-66-3	0.32	U	0.32	1.6	U	1.6
1,1,1-Trichloroethane	71-55-6	0.32	U	0.32	1.7	U	1.7
Cyclohexane	110-82-7	2.7	D	0.32	9.3	D	1.1
Carbon Tetrachloride	56-23-5	0.32	U	0.32	2.0	U	2.0
2,2,4-Trimethylpentane	540-84-1	0.32	U	0.32	1.5	U	1.5
Benzene	71-43-2	0.82	D	0.32	2.6	D	1.0
1,2-Dichloroethane	107-06-2	0.32	U	0.32	1.3	U	1.3
n-Heptane	142-82-5	0.74	D	0.32	3.0	D	1.3

* Combine with original analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-008DL

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663533D1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.32	U	0.32	1.7	U	1.7
1,2-Dichloropropane	78-87-5	0.32	U	0.32	1.5	U	1.5
1,4-Dioxane	123-91-1	8.0	U	8.0	29	U	29
Bromodichloromethane	75-27-4	0.32	U	0.32	2.1	U	2.1
cis-1,3-Dichloropropene	10061-01-5	0.32	U	0.32	1.5	U	1.5
Methyl Isobutyl Ketone	108-10-1	0.80	U	0.80	3.3	U	3.3
Toluene	108-88-3	4.0	D	0.32	15	D	1.2
trans-1,3-Dichloropropene	10061-02-6	0.32	U	0.32	1.5	U	1.5
1,1,2-Trichloroethane	79-00-5	0.32	U	0.32	1.7	U	1.7
Tetrachloroethene	127-18-4	1.1	D	0.32	7.5	D	2.2
Methyl Butyl Ketone	591-78-6	0.80	U	0.80	3.3	U	3.3
Dibromochloromethane	124-48-1	0.32	U	0.32	2.7	U	2.7
1,2-Dibromoethane	106-93-4	0.32	U	0.32	2.5	U	2.5
Chlorobenzene	108-90-7	0.32	U	0.32	1.5	U	1.5
Ethylbenzene	100-41-4	0.36	D	0.32	1.6	D	1.4
Xylene (m,p)	1330-20-7	1.3	D	0.80	5.6	D	3.5
Xylene (o)	95-47-6	0.45	D	0.32	2.0	D	1.4
Xylene (total)	1330-20-7	1.8	D	0.32	7.8	D	1.4
Styrene	100-42-5	0.46	D	0.32	2.0	D	1.4
Bromoform	75-25-2	0.32	U	0.32	3.3	U	3.3
1,1,2,2-Tetrachloroethane	79-34-5	0.32	U	0.32	2.2	U	2.2
4-Ethyltoluene	622-96-8	0.43	D	0.32	2.1	D	1.6
1,3,5-Trimethylbenzene	108-67-8	0.32	U	0.32	1.6	U	1.6
2-Chlorotoluene	95-49-8	0.32	U	0.32	1.7	U	1.7
1,2,4-Trimethylbenzene	95-63-6	0.56	D	0.32	2.8	D	1.6
1,3-Dichlorobenzene	541-73-1	0.32	U	0.32	1.9	U	1.9
1,4-Dichlorobenzene	106-46-7	0.32	U	0.32	1.9	U	1.9
1,2-Dichlorobenzene	95-50-1	0.32	U	0.32	1.9	U	1.9
1,2,4-Trichlorobenzene	120-82-1	0.80	U	0.80	5.9	U	5.9
Hexachlorobutadiene	87-68-3	0.32	U	0.32	3.4	U	3.4

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-195

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663534

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.50	U	0.50	2.5	U	2.5
1,2-Dichlorotetrafluoroethane	76-14-2	0.20	U	0.20	1.4	U	1.4
Chloromethane	74-87-3	0.50	U	0.50	1.0	U	1.0
Vinyl Chloride	75-01-4	0.20	U	0.20	0.51	U	0.51
1,3-Butadiene	106-99-0	0.50	U	0.50	1.1	U	1.1
Bromomethane	74-83-9	0.20	U	0.20	0.78	U	0.78
Chloroethane	75-00-3	0.50	U	0.50	1.3	U	1.3
Bromoethene	593-60-2	0.20	U	0.20	0.87	U	0.87
Trichlorofluoromethane	75-69-4	0.20	U	0.20	1.1	U	1.1
Freon TF	76-13-1	0.20	U	0.20	1.5	U	1.5
1,1-Dichloroethene	75-35-4	0.20	U	0.20	0.79	U	0.79
Acetone	67-64-1	5.0	U	5.0	12	U	12
Isopropyl Alcohol	67-63-0	5.0	U	5.0	12	U	12
Carbon Disulfide	75-15-0	0.50	U	0.50	1.6	U	1.6
3-Chloropropene	107-05-1	0.50	U	0.50	1.6	U	1.6
Methylene Chloride	75-09-2	0.50	U	0.50	1.7	U	1.7
tert-Butyl Alcohol	75-65-0	5.0	U	5.0	15	U	15
Methyl tert-Butyl Ether	1634-04-4	0.50	U	0.50	1.8	U	1.8
trans-1,2-Dichloroethene	156-60-5	0.20	U	0.20	0.79	U	0.79
n-Hexane	110-54-3	0.50	U	0.50	1.8	U	1.8
1,1-Dichloroethane	75-34-3	0.20	U	0.20	0.81	U	0.81
1,2-Dichloroethene (total)	540-59-0	0.20	U	0.20	0.79	U	0.79
Methyl Ethyl Ketone	78-93-3	0.50	U	0.50	1.5	U	1.5
cis-1,2-Dichloroethene	156-59-2	0.20	U	0.20	0.79	U	0.79
Tetrahydrofuran	109-99-9	5.0	U	5.0	15	U	15
Chloroform	67-66-3	0.20	U	0.20	0.98	U	0.98
1,1,1-Trichloroethane	71-55-6	0.20	U	0.20	1.1	U	1.1
Cyclohexane	110-82-7	0.20	U	0.20	0.69	U	0.69
Carbon Tetrachloride	56-23-5	0.20	U	0.20	1.3	U	1.3
2,2,4-Trimethylpentane	540-84-1	0.20	U	0.20	0.93	U	0.93
Benzene	71-43-2	0.20	U	0.20	0.64	U	0.64
1,2-Dichloroethane	107-06-2	0.20	U	0.20	0.81	U	0.81
n-Heptane	142-82-5	0.20	U	0.20	0.82	U	0.82

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-195

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663534

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.20	U	0.20	1.1	U	1.1
1,2-Dichloropropane	78-87-5	0.20	U	0.20	0.92	U	0.92
1,4-Dioxane	123-91-1	5.0	U	5.0	18	U	18
Bromodichloromethane	75-27-4	0.20	U	0.20	1.3	U	1.3
cis-1,3-Dichloropropene	10061-01-5	0.20	U	0.20	0.91	U	0.91
Methyl Isobutyl Ketone	108-10-1	0.50		0.50	2.0		2.0
Toluene	108-88-3	4.0		0.20	15		0.75
trans-1,3-Dichloropropene	10061-02-6	0.20	U	0.20	0.91	U	0.91
1,1,2-Trichloroethane	79-00-5	0.20	U	0.20	1.1	U	1.1
Tetrachloroethene	127-18-4	0.55		0.20	3.7		1.4
Methyl Butyl Ketone	591-78-6	0.50	U	0.50	2.0	U	2.0
Dibromochloromethane	124-48-1	0.20	U	0.20	1.7	U	1.7
1,2-Dibromoethane	106-93-4	0.20	U	0.20	1.5	U	1.5
Chlorobenzene	108-90-7	0.20	U	0.20	0.92	U	0.92
Ethylbenzene	100-41-4	0.42		0.20	1.8		0.87
Xylene (m,p)	1330-20-7	1.5		0.50	6.5		2.2
Xylene (o)	95-47-6	0.71		0.20	3.1		0.87
Xylene (total)	1330-20-7	2.3		0.20	10		0.87
Styrene	100-42-5	0.42		0.20	1.8		0.85
Bromoform	75-25-2	0.20	U	0.20	2.1	U	2.1
1,1,2,2-Tetrachloroethane	79-34-5	0.20	U	0.20	1.4	U	1.4
4-Ethyltoluene	622-96-8	0.58		0.20	2.9		0.98
1,3,5-Trimethylbenzene	108-67-8	0.30		0.20	1.5		0.98
2-Chlorotoluene	95-49-8	0.20	U	0.20	1.0	U	1.0
1,2,4-Trimethylbenzene	95-63-6	0.88		0.20	4.3		0.98
1,3-Dichlorobenzene	541-73-1	0.20	U	0.20	1.2	U	1.2
1,4-Dichlorobenzene	106-46-7	0.20	U	0.20	1.2	U	1.2
1,2-Dichlorobenzene	95-50-1	0.20	U	0.20	1.2	U	1.2
1,2,4-Trichlorobenzene	120-82-1	0.50	U	0.50	3.7	U	3.7
Hexachlorobutadiene	87-68-3	0.20	U	0.20	2.1	U	2.1

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-197

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663538

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.65		0.40	3.2		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.47		0.16	2.6		0.90
Freon TF	76-13-1	1.1		0.16	8.4		1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	8.7		4.0	21		9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	1.3		0.40	4.0		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.67		0.40	2.4		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.1		0.40	3.2		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.82		0.16	2.8		0.55
Carbon Tetrachloride	56-23-5	0.62		0.16	3.9		1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	0.49		0.16	1.6		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.42		0.16	1.7		0.66

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-197

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663538

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	7.0		0.16	26		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.70		0.16	4.7		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.45		0.16	2.0		0.69
Xylene (m,p)	1330-20-7	1.1		0.40	4.8		1.7
Xylene (o)	95-47-6	0.47		0.16	2.0		0.69
Xylene (total)	1330-20-7	1.6		0.16	6.9		0.69
Styrene	100-42-5	0.52		0.16	2.2		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.37		0.16	1.8		0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.51		0.16	2.5		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-011

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663539

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.66		0.40	3.3		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.79		0.40	1.6		0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.65		0.40	1.4		0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.45		0.16	2.5		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	13		4.0	31		9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.59		0.40	2.0		1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.40	U	0.40	1.4	U	1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.3		0.40	3.8		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.19		0.16	0.65		0.55
Carbon Tetrachloride *	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	0.49		0.16	1.6		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.18		0.16	0.74		0.66

* Combine with low level re analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-011

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663539

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene *	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	1.3		0.16	4.9		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	1.7		0.16	12		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.17		0.16	0.74		0.69
Xylene (m,p)	1330-20-7	0.46		0.40	2.0		1.7
Xylene (o)	95-47-6	0.22		0.16	0.96		0.69
Xylene (total)	1330-20-7	0.71		0.16	3.1		0.69
Styrene	100-42-5	0.20		0.16	0.85		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.55		0.16	2.7		0.79
1,3,5-Trimethylbenzene	108-67-8	0.21		0.16	1.0		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.70		0.16	3.4		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

* Compound with low level recovery.

TO-14/15
Result Summary

CLIENT SAMPLE NO.
IA-06-ARM-011RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663539R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.11		0.040	0.69		0.25
Trichloroethene *	79-01-6	0.041		0.040	0.22		0.21

* confirmed with original analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-198

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663540

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.40	U	0.40	2.0	U	2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.45		0.16	2.5		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	18		4.0	43		9.5
Isopropyl Alcohol	67-63-0	7.5		4.0	18		9.8
Carbon Disulfide	75-15-0	2.4		0.40	7.5		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.43		0.40	1.5		1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	1.1		0.40	3.9		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.9		0.40	5.6		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	1.5		0.16	5.2		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	0.51		0.16	1.6		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.38		0.16	1.6		0.66

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-ARM-198

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663540

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	~~4.0~~	~~U~~	4.0	~~14~~	~~U~~	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	7.9		0.16	30		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	1.1		0.16	7.5		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.39		0.16	1.7		0.69
Xylene (m,p)	1330-20-7	0.96		0.40	4.2		1.7
Xylene (o)	95-47-6	0.42		0.16	1.8		0.69
Xylene (total)	1330-20-7	1.4		0.16	6.1		0.69
Styrene	100-42-5	0.23		0.16	0.98		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.34		0.16	1.7		0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.53		0.16	2.6		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

OA-06-ARM-002

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663541

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.74		0.40	3.7		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.81		0.40	1.7		0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.34		0.16	1.9		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	4.0	U	4.0	9.5	U	9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.40	U	0.40	1.4	U	1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.40	U	0.40	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.16	U	0.16	0.55	U	0.55
Carbon Tetrachloride *	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.16	U	0.16	0.75	U	0.75
Benzene	71-43-2	0.35		0.16	1.1		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.16	U	0.16	0.66	U	0.66

* Confirm with low level reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

OA-06-ARM-002

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663541

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene *	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	1.0		0.16	3.8		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.16	U	0.16	1.1	U	1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.16	U	0.16	0.69	U	0.69
Xylene (m,p)	1330-20-7	0.40	U	0.40	1.7	U	1.7
Xylene (o)	95-47-6	0.16	U	0.16	0.69	U	0.69
Xylene (total)	1330-20-7	0.16	U	0.16	0.69	U	0.69
Styrene	100-42-5	0.16	U	0.16	0.68	U	0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.16	U	0.16	0.79	U	0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.16	U	0.16	0.79	U	0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

* Combine with low level reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

OA-06-ARM-002RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663541R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.11		0.040	0.69		0.25
Trichloroethene *	79-01-6	0.040	U	0.040	0.21	U	0.21

* combine with original analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-012

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663542

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	1.4		0.40	6.9		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.78		0.40	1.6		0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.32		0.16	1.8		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	9.5		4.0	23		9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.40	U	0.40	1.4	U	1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.40	U	0.40	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.16	U	0.16	0.55	U	0.55
Carbon Tetrachloride *	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.20		0.16	0.93		0.75
Benzene	71-43-2	0.41		0.16	1.3		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.24		0.16	0.98		0.66

* combine with low level reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-012

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663542

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene *	79-01-6	~~0.16~~	~~U~~	~~0.16~~	~~0.86~~	~~U~~	~~0.86~~
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	~~4.0~~	~~U~~ R	4.0	~~14~~	~~U~~ R	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	1.5		0.16	5.7		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.16	U	0.16	1.1	U	1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.18		0.16	0.78		0.69
Xylene (m,p)	1330-20-7	0.59		0.40	2.6		1.7
Xylene (o)	95-47-6	0.22		0.16	0.96		0.69
Xylene (total)	1330-20-7	0.84		0.16	3.6		0.69
Styrene	100-42-5	0.16	U	0.16	0.68	U	0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.16	U	0.16	0.79	U	0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.25		0.16	1.3		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	4.3		0.16	26		0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

* combine with low level reanalysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-012RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663542R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.11		0.040	0.69		0.25
Trichloroethene *	79-01-6	0.040	U	0.040	0.21	U	0.21

* combine with original analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-FRX-199

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663543

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	1.7	U	1.7	8.4	U	8.4
1,2-Dichlorotetrafluoroethane	76-14-2	0.67	U	0.67	4.7	U	4.7
Chloromethane	74-87-3	1.7	U	1.7	3.5	U	3.5
Vinyl Chloride	75-01-4	0.67	U	0.67	1.7	U	1.7
1,3-Butadiene	106-99-0	1.7	U	1.7	3.8	U	3.8
Bromomethane	74-83-9	0.67	U	0.67	2.6	U	2.6
Chloroethane	75-00-3	1.7	U	1.7	4.5	U	4.5
Bromoethene	593-60-2	0.67	U	0.67	2.9	U	2.9
Trichlorofluoromethane	75-69-4	0.67	U	0.67	3.8	U	3.8
Freon TF	76-13-1	0.67	U	0.67	5.1	U	5.1
1,1-Dichloroethene	75-35-4	0.67	U	0.67	2.7	U	2.7
Acetone	67-64-1	41		17	97		40
Isopropyl Alcohol	67-63-0	17	U	17	42	U	42
Carbon Disulfide	75-15-0	3.0		1.7	9.3		5.3
3-Chloropropene	107-05-1	1.7	U	1.7	5.3	U	5.3
Methylene Chloride	75-09-2	1.7	U	1.7	5.9	U	5.9
tert-Butyl Alcohol	75-65-0	17	U	17	52	U	52
Methyl tert-Butyl Ether	1634-04-4	1.7	U	1.7	6.1	U	6.1
trans-1,2-Dichloroethene	156-60-5	0.67	U	0.67	2.7	U	2.7
n-Hexane	110-54-3	1.7	U	1.7	6.0	U	6.0
1,1-Dichloroethane	75-34-3	0.67	U	0.67	2.7	U	2.7
1,2-Dichloroethene (total)	540-59-0	0.67	U	0.67	2.7	U	2.7
Methyl Ethyl Ketone	78-93-3	3.5		1.7	10		5.0
cis-1,2-Dichloroethene	156-59-2	0.67	U	0.67	2.7	U	2.7
Tetrahydrofuran	109-99-9	17	U	17	50	U	50
Chloroform	67-66-3	0.67	U	0.67	3.3	U	3.3
1,1,1-Trichloroethane	71-55-6	0.67	U	0.67	3.7	U	3.7
Cyclohexane	110-82-7	2.0		0.67	6.9		2.3
Carbon Tetrachloride	56-23-5	0.67	U	0.67	4.2	U	4.2
2,2,4-Trimethylpentane	540-84-1	0.67	U	0.67	3.1	U	3.1
Benzene	71-43-2	1.1		0.67	3.5		2.1
1,2-Dichloroethane	107-06-2	0.67	U	0.67	2.7	U	2.7
n-Heptane	142-82-5	1.7		0.67	7.0		2.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-FRX-199

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663543

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.67	U	0.67	3.6	U	3.6
1,2-Dichloropropane	78-87-5	0.67	U	0.67	3.1	U	3.1
1,4-Dioxane	123-91-1	~~17~~	~~U~~	17	~~61~~	~~U~~	61
Bromodichloromethane	75-27-4	0.67	U	0.67	4.5	U	4.5
cis-1,3-Dichloropropene	10061-01-5	0.67	U	0.67	3.0	U	3.0
Methyl Isobutyl Ketone	108-10-1	1.7	U	1.7	7.0	U	7.0
Toluene	108-88-3	15		0.67	57		2.5
trans-1,3-Dichloropropene	10061-02-6	0.67	U	0.67	3.0	U	3.0
1,1,2-Trichloroethane	79-00-5	0.67	U	0.67	3.7	U	3.7
Tetrachloroethene	127-18-4	0.72		0.67	4.9		4.5
Methyl Butyl Ketone	591-78-6	1.7	U	1.7	7.0	U	7.0
Dibromochloromethane	124-48-1	0.67	U	0.67	5.7	U	5.7
1,2-Dibromoethane	106-93-4	0.67	U	0.67	5.1	U	5.1
Chlorobenzene	108-90-7	0.67	U	0.67	3.1	U	3.1
Ethylbenzene	100-41-4	0.88		0.67	3.8		2.9
Xylene (m,p)	1330-20-7	2.0		1.7	8.7		7.4
Xylene (o)	95-47-6	0.88		0.67	3.8		2.9
Xylene (total)	1330-20-7	3.0		0.67	13		2.9
Styrene	100-42-5	0.66	J	0.67	2.8	J	2.9
Bromoform	75-25-2	0.67	U	0.67	6.9	U	6.9
1,1,2,2-Tetrachloroethane	79-34-5	0.67	U	0.67	4.6	U	4.6
4-Ethyltoluene	622-96-8	0.67	U	0.67	3.3	U	3.3
1,3,5-Trimethylbenzene	108-67-8	0.67	U	0.67	3.3	U	3.3
2-Chlorotoluene	95-49-8	0.67	U	0.67	3.5	U	3.5
1,2,4-Trimethylbenzene	95-63-6	0.90		0.67	4.4		3.3
1,3-Dichlorobenzene	541-73-1	0.67	U	0.67	4.0	U	4.0
1,4-Dichlorobenzene	106-46-7	1.7		0.67	10		4.0
1,2-Dichlorobenzene	95-50-1	0.67	U	0.67	4.0	U	4.0
1,2,4-Trichlorobenzene	120-82-1	1.7	U	1.7	13	U	13
Hexachlorobutadiene	87-68-3	0.67	U	0.67	7.1	U	7.1

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-013

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663544

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.64		0.40	3.2		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.59		0.40	1.2		0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	2.9		0.40	6.4		0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.29		0.16	1.6		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone *	67-64-1	120	E	4.0	290	E	9.5
Isopropyl Alcohol	67-63-0	4.0	U	4.0	9.8	U	9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	1.8		0.40	6.3		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.40	U	0.40	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.29		0.16	1.0		0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	1.1		0.16	5.1		0.75
Benzene	71-43-2	3.3		0.16	11		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.55		0.16	2.3		0.66

* combine with data from reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-013

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663544

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U R	4.0	14	U R	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene *	108-88-3	35	E	0.16	130	E	0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.16	U	0.16	1.1	U	1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	1.4		0.16	6.1		0.69
Xylene (m,p)	1330-20-7	4.5		0.40	20		1.7
Xylene (o)	95-47-6	1.6		0.16	6.9		0.69
Xylene (total)	1330-20-7	6.4		0.16	28		0.69
Styrene	100-42-5	0.41		0.16	1.7		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	1.3		0.16	6.4		0.79
1,3,5-Trimethylbenzene	108-67-8	0.40		0.16	2.0		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	1.5		0.16	7.4		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

* Combine with dilution reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-013DL

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663544D1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	2.5	U	2.5	12	U	12
1,2-Dichlorotetrafluoroethane	76-14-2	1.0	U	1.0	7.0	U	7.0
Chloromethane	74-87-3	2.5	U	2.5	5.2	U	5.2
Vinyl Chloride	75-01-4	1.0	U	1.0	2.6	U	2.6
1,3-Butadiene	106-99-0	3.9	D	2.5	8.6	D	5.5
Bromomethane	74-83-9	1.0	U	1.0	3.9	U	3.9
Chloroethane	75-00-3	2.5	U	2.5	6.6	U	6.6
Bromoethene	593-60-2	1.0	U	1.0	4.4	U	4.4
Trichlorofluoromethane	75-69-4	1.0	U	1.0	5.6	U	5.6
Freon TF	76-13-1	1.0	U	1.0	7.7	U	7.7
1,1-Dichloroethene	75-35-4	1.0	U	1.0	4.0	U	4.0
Acetone *	67-64-1	130	D	25	310	D	59
Isopropyl Alcohol	67-63-0	25	U	25	61	U	61
Carbon Disulfide	75-15-0	2.5	U	2.5	7.8	U	7.8
3-Chloropropene	107-05-1	2.5	U	2.5	7.8	U	7.8
Methylene Chloride	75-09-2	2.5	U	2.5	8.7	U	8.7
tert-Butyl Alcohol	75-65-0	25	U	25	76	U	76
Methyl tert-Butyl Ether	1634-04-4	2.5	U	2.5	9.0	U	9.0
trans-1,2-Dichloroethene	156-60-5	1.0	U	1.0	4.0	U	4.0
n-Hexane	110-54-3	2.5	U	2.5	8.8	U	8.8
1,1-Dichloroethane	75-34-3	1.0	U	1.0	4.0	U	4.0
1,2-Dichloroethene (total)	540-59-0	1.0	U	1.0	4.0	U	4.0
Methyl Ethyl Ketone	78-93-3	2.5	U	2.5	7.4	U	7.4
cis-1,2-Dichloroethene	156-59-2	1.0	U	1.0	4.0	U	4.0
Tetrahydrofuran	109-99-9	25	U	25	74	U	74
Chloroform	67-66-3	1.0	U	1.0	4.9	U	4.9
1,1,1-Trichloroethane	71-55-6	1.0	U	1.0	5.5	U	5.5
Cyclohexane	110-82-7	1.0	U	1.0	3.4	U	3.4
Carbon Tetrachloride	56-23-5	1.0	U	1.0	6.3	U	6.3
2,2,4-Trimethylpentane	540-84-1	1.5	D	1.0	7.0	D	4.7
Benzene	71-43-2	4.4	D	1.0	14	D	3.2
1,2-Dichloroethane	107-06-2	1.0	U	1.0	4.0	U	4.0
n-Heptane	142-82-5	1.0	D	1.0	4.1	D	4.1

* Combine with original analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-FRX-013DL

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663544D1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	1.0	U	1.0	5.4	U	5.4
1,2-Dichloropropane	78-87-5	1.0	U	1.0	4.6	U	4.6
1,4-Dioxane	123-91-1	25	U R	25	90	U R	90
Bromodichloromethane	75-27-4	1.0	U	1.0	6.7	U	6.7
cis-1,3-Dichloropropene	10061-01-5	1.0	U	1.0	4.5	U	4.5
Methyl Isobutyl Ketone	108-10-1	2.5	U	2.5	10	U	10
Toluene *	108-88-3	36	D	1.0	140	D	3.8
trans-1,3-Dichloropropene	10061-02-6	1.0	U	1.0	4.5	U	4.5
1,1,2-Trichloroethane	79-00-5	1.0	U	1.0	5.5	U	5.5
Tetrachloroethene	127-18-4	1.0	U	1.0	6.8	U	6.8
Methyl Butyl Ketone	591-78-6	2.5	U	2.5	10	U	10
Dibromochloromethane	124-48-1	1.0	U	1.0	8.5	U	8.5
1,2-Dibromoethane	106-93-4	1.0	U	1.0	7.7	U	7.7
Chlorobenzene	108-90-7	1.0	U	1.0	4.6	U	4.6
Ethylbenzene	100-41-4	1.8	D	1.0	7.8	D	4.3
Xylene (m,p)	1330-20-7	4.8	D	2.5	21	D	11
Xylene (o)	95-47-6	2.1	D	1.0	9.1	D	4.3
Xylene (total)	1330-20-7	7.2	D	1.0	31	D	4.3
Styrene	100-42-5	1.0	U	1.0	4.3	U	4.3
Bromoform	75-25-2	1.0	U	1.0	10	U	10
1,1,2,2-Tetrachloroethane	79-34-5	1.0	U	1.0	6.9	U	6.9
4-Ethyltoluene	622-96-8	1.0	U	1.0	4.9	U	4.9
1,3,5-Trimethylbenzene	108-67-8	1.0	U	1.0	4.9	U	4.9
2-Chlorotoluene	95-49-8	1.0	U	1.0	5.2	U	5.2
1,2,4-Trimethylbenzene	95-63-6	1.8	D	1.0	8.8	D	4.9
1,3-Dichlorobenzene	541-73-1	1.0	U	1.0	6.0	U	6.0
1,4-Dichlorobenzene	106-46-7	1.0	U	1.0	6.0	U	6.0
1,2-Dichlorobenzene	95-50-1	1.0	U	1.0	6.0	U	6.0
1,2,4-Trichlorobenzene	120-82-1	2.5	U	2.5	19	U	19
Hexachlorobutadiene	87-68-3	1.0	U	1.0	11	U	11

* Co-elution with original analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-FRX-200

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663545

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.46		0.40	2.3		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.40	U	0.40	0.83	U	0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74 83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.40		0.16	2.2		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	23		4.0	55		9.5
Isopropyl Alcohol	67-63-0	4.1		4.0	10		9.8
Carbon Disulfide	75-15-0	1.1		0.40	3.4		1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	3.0		0.40	11		1.4
1,1-Dichloroethane	75-34-3	2.8		0.16	11		0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	1.3		0.40	3.8		1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.85		0.16	4.2		0.78
1,1,1-Trichloroethane *	71-55-6	470	E	0.16	2600	E	0.87
Cyclohexane	110-82-7	62	E	0.16	210	E	0.55
Carbon Tetrachloride	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.24		0.16	1.1		0.75
Benzene	71-43-2	1.7		0.16	5.4		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	1.3		0.16	5.3		0.66

* number with dilution reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-FRX-200

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663545

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.52		0.16	2.8		0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.45		0.40	1.8		1.6
Toluene	108-88-3	20		0.16	75		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	4.1		0.16	28		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.91		0.16	4.0		0.69
Xylene (m,p)	1330-20-7	2.6		0.40	11		1.7
Xylene (o)	95-47-6	0.95		0.16	4.1		0.69
Xylene (total)	1330-20-7	3.7		0.16	16		0.69
Styrene	100-42-5	0.42		0.16	1.8		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.67		0.16	3.3		0.79
1,3,5-Trimethylbenzene	108-67-8	0.27		0.16	1.3		0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.88		0.16	4.3		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-FRX-200DL

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663545D1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	10	U	10	49	U	49
1,2-Dichlorotetrafluoroethane	76-14-2	4.0	U	4.0	28	U	28
Chloromethane	74-87-3	10	U	10	21	U	21
Vinyl Chloride	75-01-4	4.0	U	4.0	10	U	10
1,3-Butadiene	106-99-0	10	U	10	22	U	22
Bromomethane	74-83-9	4.0	U	4.0	16	U	16
Chloroethane	75-00-3	10	U	10	26	U	26
Bromoethene	593-60-2	4.0	U	4.0	17	U	17
Trichlorofluoromethane	75-69-4	4.0	U	4.0	22	U	22
Freon TF	76-13-1	4.0	U	4.0	31	U	31
1,1-Dichloroethene	75-35-4	4.0	U	4.0	16	U	16
Acetone	67-64-1	100	U	100	240	U	240
Isopropyl Alcohol	67-63-0	100	U	100	250	U	250
Carbon Disulfide	75-15-0	10	U	10	31	U	31
3-Chloropropene	107-05-1	10	U	10	31	U	31
Methylene Chloride	75-09-2	10	U	10	35	U	35
tert-Butyl Alcohol	75-65-0	100	U	100	300	U	300
Methyl tert-Butyl Ether	1634-04-4	10	U	10	36	U	36
trans-1,2-Dichloroethene	156-60-5	4.0	U	4.0	16	U	16
n-Hexane	110-54-3	10	U	10	35	U	35
1,1-Dichloroethane	75-34-3	4.4	D	4.0	18	D	16
1,2-Dichloroethene (total)	540-59-0	4.0	U	4.0	16	U	16
Methyl Ethyl Ketone	78-93-3	10	U	10	29	U	29
cis-1,2-Dichloroethene	156-59-2	4.0	U	4.0	16	U	16
Tetrahydrofuran	109-99-9	100	U	100	290	U	290
Chloroform	67-66-3	4.0	U	4.0	20	U	20
1,1,1-Trichloroethane *	71-55-6	410	~~D~~	4.0	2200	~~D~~	22
Cyclohexane	110-82-7	4.0	U	4.0	14	U	14
Carbon Tetrachloride	56-23-5	4.0	U	4.0	25	U	25
2,2,4-Trimethylpentane	540-84-1	4.0	U	4.0	19	U	19
Benzene	71-43-2	4.0	U	4.0	13	U	13
1,2-Dichloroethane	107-06-2	4.0	U	4.0	16	U	16
n-Heptane	142-82-5	4.0	U	4.0	16	U	16

* combine with original analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

SG-06-FRX-200DL

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663545D1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	4.0	U	4.0	21	U	21
1,2-Dichloropropane	78-87-5	4.0	U	4.0	18	U	18
1,4-Dioxane	123-91-1	100	U	100	360	U	360
Bromodichloromethane	75-27-4	4.0	U	4.0	27	U	27
cis-1,3-Dichloropropene	10061-01-5	4.0	U	4.0	18	U	18
Methyl Isobutyl Ketone	108-10-1	10	U	10	41	U	41
Toluene	108-88-3	27	D	4.0	100	D	15
trans-1,3-Dichloropropene	10061-02-6	4.0	U	4.0	18	U	18
1,1,2-Trichloroethane	79-00-5	4.0	U	4.0	22	U	22
Tetrachloroethene	127-18-4	6.9	D	4.0	47	D	27
Methyl Butyl Ketone	591-78-6	10	U	10	41	U	41
Dibromochloromethane	124-48-1	4.0	U	4.0	34	U	34
1,2-Dibromoethane	106-93-4	4.0	U	4.0	31	U	31
Chlorobenzene	108-90-7	4.0	U	4.0	18	U	18
Ethylbenzene	100-41-4	4.0	U	4.0	17	U	17
Xylene (m,p)	1330-20-7	10	U	10	43	U	43
Xylene (o)	95-47-6	4.0	U	4.0	17	U	17
Xylene (total)	1330-20-7	4.0	U	4.0	17	U	17
Styrene	100-42-5	4.0	U	4.0	17	U	17
Bromoform	75-25-2	4.0	U	4.0	41	U	41
1,1,2,2-Tetrachloroethane	79-34-5	4.0	U	4.0	27	U	27
4-Ethyltoluene	622-96-8	4.0	U	4.0	20	U	20
1,3,5-Trimethylbenzene	108-67-8	4.0	U	4.0	20	U	20
2-Chlorotoluene	95-49-8	4.0	U	4.0	21	U	21
1,2,4-Trimethylbenzene	95-63-6	4.0	U	4.0	20	U	20
1,3-Dichlorobenzene	541-73-1	4.0	U	4.0	24	U	24
1,4-Dichlorobenzene	106-46-7	4.0	U	4.0	24	U	24
1,2-Dichlorobenzene	95-50-1	4.0	U	4.0	24	U	24
1,2,4-Trichlorobenzene	120-82-1	10	U	10	74	U	74
Hexachlorobutadiene	87-68-3	4.0	U	4.0	43	U	43

TO-14/15
Result Summary

CLIENT SAMPLE NO.

OA-06-FRX-003

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663546

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Dichlorodifluoromethane	75-71-8	0.65		0.40	3.2		2.0
1,2-Dichlorotetrafluoroethane	76-14-2	0.16	U	0.16	1.1	U	1.1
Chloromethane	74-87-3	0.82		0.40	1.7		0.83
Vinyl Chloride	75-01-4	0.16	U	0.16	0.41	U	0.41
1,3-Butadiene	106-99-0	0.40	U	0.40	0.88	U	0.88
Bromomethane	74-83-9	0.16	U	0.16	0.62	U	0.62
Chloroethane	75-00-3	0.40	U	0.40	1.1	U	1.1
Bromoethene	593-60-2	0.16	U	0.16	0.70	U	0.70
Trichlorofluoromethane	75-69-4	0.29		0.16	1.6		0.90
Freon TF	76-13-1	0.16	U	0.16	1.2	U	1.2
1,1-Dichloroethene	75-35-4	0.16	U	0.16	0.63	U	0.63
Acetone	67-64-1	4.0	U	4.0	9.5	U	9.5
Isopropyl Alcohol	67-63-0	0.58	J	4.0	1.4	J	9.8
Carbon Disulfide	75-15-0	0.40	U	0.40	1.2	U	1.2
3-Chloropropene	107-05-1	0.40	U	0.40	1.3	U	1.3
Methylene Chloride	75-09-2	0.40	U	0.40	1.4	U	1.4
tert-Butyl Alcohol	75-65-0	4.0	U	4.0	12	U	12
Methyl tert-Butyl Ether	1634-04-4	0.40	U	0.40	1.4	U	1.4
trans-1,2-Dichloroethene	156-60-5	0.16	U	0.16	0.63	U	0.63
n-Hexane	110-54-3	0.66		0.40	2.3		1.4
1,1-Dichloroethane	75-34-3	0.16	U	0.16	0.65	U	0.65
1,2-Dichloroethene (total)	540-59-0	0.16	U	0.16	0.63	U	0.63
Methyl Ethyl Ketone	78-93-3	0.40	U	0.40	1.2	U	1.2
cis-1,2-Dichloroethene	156-59-2	0.16	U	0.16	0.63	U	0.63
Tetrahydrofuran	109-99-9	4.0	U	4.0	12	U	12
Chloroform	67-66-3	0.16	U	0.16	0.78	U	0.78
1,1,1-Trichloroethane	71-55-6	0.16	U	0.16	0.87	U	0.87
Cyclohexane	110-82-7	0.16	U	0.16	0.55	U	0.55
Carbon Tetrachloride *	56-23-5	0.16	U	0.16	1.0	U	1.0
2,2,4-Trimethylpentane	540-84-1	0.42		0.16	2.0		0.75
Benzene	71-43-2	0.51		0.16	1.6		0.51
1,2-Dichloroethane	107-06-2	0.16	U	0.16	0.65	U	0.65
n-Heptane	142-82-5	0.24		0.16	0.98		0.66

* Combine with [illegible] low level analysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

OA-06-FRX-003

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663546

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene *	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl Isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	1.6		0.16	6.0		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.16	U	0.16	1.1	U	1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.19		0.16	0.83		0.69
Xylene (m,p)	1330-20-7	0.53		0.40	2.3		1.7
Xylene (o)	95-47-6	0.23		0.16	1.0		0.69
Xylene (total)	1330-20-7	0.79		0.16	3.4		0.69
Styrene	100-42-5	0.16	U	0.16	0.68	U	0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.16	U	0.16	0.79	U	0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.21		0.16	1.0		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

* combine with low level reanalysis

TO-14/15
Result Summary

CLIENT SAMPLE NO.

OA-06-FRX-003RE

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663546R1

Date Analyzed: 04/10/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Carbon Tetrachloride *	56-23-5	0.11		0.040	0.69		0.25
Trichloroethene *	79-01-6	0.040	U	0.040	0.21	U	0.21

* Combine with original analysis.

TO-14/15
Result Summary

CLIENT SAMPLE NO.

IA-06-ARM-008

Lab Name: STL Burlington

SDG Number: 113466

Case Number:

Sample Matrix: AIR

Lab Sample No.: 663533

Date Analyzed: 04/08/06

Date Received: 03/30/06

Target Compound	CAS Number	Results in ppbv	Q	RL in ppbv	Results in ug/m3	Q	RL in ug/m3
Trichloroethene	79-01-6	0.16	U	0.16	0.86	U	0.86
1,2-Dichloropropane	78-87-5	0.16	U	0.16	0.74	U	0.74
1,4-Dioxane	123-91-1	4.0	U	4.0	14	U	14
Bromodichloromethane	75-27-4	0.16	U	0.16	1.1	U	1.1
cis-1,3-Dichloropropene	10061-01-5	0.16	U	0.16	0.73	U	0.73
Methyl isobutyl Ketone	108-10-1	0.40	U	0.40	1.6	U	1.6
Toluene	108-88-3	3.8		0.16	14		0.60
trans-1,3-Dichloropropene	10061-02-6	0.16	U	0.16	0.73	U	0.73
1,1,2-Trichloroethane	79-00-5	0.16	U	0.16	0.87	U	0.87
Tetrachloroethene	127-18-4	0.99		0.16	6.7		1.1
Methyl Butyl Ketone	591-78-6	0.40	U	0.40	1.6	U	1.6
Dibromochloromethane	124-48-1	0.16	U	0.16	1.4	U	1.4
1,2-Dibromoethane	106-93-4	0.16	U	0.16	1.2	U	1.2
Chlorobenzene	108-90-7	0.16	U	0.16	0.74	U	0.74
Ethylbenzene	100-41-4	0.34		0.16	1.5		0.69
Xylene (m,p)	1330-20-7	1.1		0.40	4.8		1.7
Xylene (o)	95-47-6	0.38		0.16	1.7		0.69
Xylene (total)	1330-20-7	1.6		0.16	6.9		0.69
Styrene	100-42-5	0.36		0.16	1.5		0.68
Bromoform	75-25-2	0.16	U	0.16	1.7	U	1.7
1,1,2,2-Tetrachloroethane	79-34-5	0.16	U	0.16	1.1	U	1.1
4-Ethyltoluene	622-96-8	0.35		0.16	1.7		0.79
1,3,5-Trimethylbenzene	108-67-8	0.16	U	0.16	0.79	U	0.79
2-Chlorotoluene	95-49-8	0.16	U	0.16	0.83	U	0.83
1,2,4-Trimethylbenzene	95-63-6	0.52		0.16	2.6		0.79
1,3-Dichlorobenzene	541-73-1	0.16	U	0.16	0.96	U	0.96
1,4-Dichlorobenzene	106-46-7	0.16	U	0.16	0.96	U	0.96
1,2-Dichlorobenzene	95-50-1	0.16	U	0.16	0.96	U	0.96
1,2,4-Trichlorobenzene	120-82-1	0.40	U	0.40	3.0	U	3.0
Hexachlorobutadiene	87-68-3	0.16	U	0.16	1.7	U	1.7

APPENDIX D

RISK CALCULATIONS

TABLE D-1
INHALATION EXPOSURE
OUTDOOR AIR (BACKGROUND - AMERICAN RECYCLE & MANUFACTURING)

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-1
INHALATION EXPOSURE
OUTDOOR AIR (BACKGROUND - AMERICAN RECYCLE & MANUFACTURING)

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
Benzene	1.10E+00	9.0E-02	8.30E-06	7.4E-07
Carbon tetrachloride	6.90E-01	5.6E-02	1.50E-05	8.4E-07
Chloromethane	1.70E+00	1.4E-01		
Dichlorodifluoromethane	3.70E+00	3.0E-01		
Toluene	3.80E+00	3.1E-01		
Trichlorofluoromethane	1.90E+00	1.5E-01		
		SUMMARY CANCER RISK		**2E-06**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-1
INHALATION EXPOSURE
OUTDOOR AIR (BACKGROUND - AMERICAN RECYCLE & MANUFACTURING)

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
Benzene	1.10E+00	2.5E-01	3.00E+01	8.4E-03
Carbon tetrachloride	6.90E-01	1.6E-01	1.80E+02	8.8E-04
Chloromethane	1.70E+00	3.9E-01	9.00E+01	4.3E-03
Dichlorodifluoromethane	3.70E+00	8.4E-01	2.00E+02	4.2E-03
Toluene	3.80E+00	8.7E-01	5.00E+03	1.7E-04
Trichlorofluoromethane	1.90E+00	4.3E-01	7.00E+02	6.2E-04
		SUMMARY HAZARD INDEX		**2E-02**

NA - not available

TABLE D-2
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - ALL CONSTITUENTS DETECTED IN INDOOR AIR - OFFICE

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-2
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - ALL CONSTITUENTS DETECTED IN INDOOR AIR - OFFICE

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	1.20E+00	9.8E-02		
1,3,5-Trimethylbenzene				
2-Butanone	1.50E+00	1.2E-01		
2-Hexanone				
2-Propanol	2.70E+01	2.2E+00		
4-Ethyltoluene				
4-Methyl-2-pentanone	3.40E+00	2.8E-01		
Acetone	3.10E+01	2.5E+00		
Benzene	1.20E+00	9.8E-02	8.30E-06	8.1E-07
Butadiene, 1,3-			3.00E-05	
Carbon disulfide				
Carbon tetrachloride	6.90E-01	5.6E-02	1.50E-05	8.4E-07
Chloroform	9.80E-01	8.0E-02	2.30E-05	1.8E-06
Chloromethane				
Cyclohexane	1.80E+00	1.5E-01		
Dichlorodifluoromethane	4.50E+00	3.7E-01		
Ethyl benzene	8.70E-01	7.1E-02		
Heptane	1.10E+00	9.0E-02		
Hexane	1.40E+00	1.1E-01		
Isooctane	7.90E-01	6.4E-02		
Methylene chloride	5.20E+00	4.2E-01	4.70E-07	2.0E-07
o-Xylene	8.30E-01	6.8E-02		
Styrene				
Tetrachloroethene	2.20E+00	1.8E-01	5.90E-06	1.1E-06
Toluene	1.10E+01	9.0E-01		
Trichloroethene	2.50E-01	2.0E-02	1.10E-04	2.2E-06
Trichlorofluoromethane	1.30E+02	1.1E+01		
Xylene, m/p	2.30E+00	1.9E-01		
		SUMMARY CANCER RISK		**7E-06**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-2
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - ALL CONSTITUENTS DETECTED IN INDOOR AIR - OFFICE

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	1.20E+00	2.7E-01	6.00E+00	4.6E-02
1,3,5-Trimethylbenzene			6.00E+00	
2-Butanone	1.50E+00	3.4E-01	5.00E+03	6.8E-05
2-Hexanone				
2-Propanol	2.70E+01	6.2E+00		
4-Ethyltoluene				
4-Methyl-2-pentanone	3.40E+00	7.8E-01	3.00E+03	2.6E-04
Acetone	3.10E+01	7.1E+00		
Benzene	1.20E+00	2.7E-01	3.00E+01	9.1E-03
Butadiene, 1,3-			2.00E+00	
Carbon disulfide			7.00E+02	
Carbon tetrachloride	6.90E-01	1.6E-01	1.80E+02	8.8E-04
Chloroform	9.80E-01	2.2E-01	4.80E+01	4.7E-03
Chloromethane			9.00E+01	
Cyclohexane	1.80E+00	4.1E-01	6.00E+03	6.8E-05
Dichlorodifluoromethane	4.50E+00	1.0E+00	2.00E+02	5.1E-03
Ethyl benzene	8.70E-01	2.0E-01	1.00E+03	2.0E-04
Heptane	1.10E+00	2.5E-01		
Hexane	1.40E+00	3.2E-01	7.00E+02	4.6E-04
Isooctane	7.90E-01	1.8E-01		
Methylene chloride	5.20E+00	1.2E+00	1.00E+03	1.2E-03
o-Xylene	8.30E-01	1.9E-01	1.00E+02	1.9E-03
Styrene			1.00E+03	
Tetrachloroethene	2.20E+00	5.0E-01	2.80E+02	1.8E-03
Toluene	1.10E+01	2.5E+00	5.00E+03	5.0E-04
Trichloroethene	2.50E-01	5.7E-02	4.00E+01	1.4E-03
Trichlorofluoromethane	1.30E+02	3.0E+01	7.00E+02	4.2E-02
Xylene, m/p	2.30E+00	5.3E-01	1.00E+02	5.3E-03
			SUMMARY HAZARD INDEX	**1E-01**

NA - not available

TABLE D-3
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - ALL CONSTITUENTS DETECTED IN INDOOR AIR - WAREHOUSE AREA

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK ($ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-3
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - ALL CONSTITUENTS DETECTED IN INDOOR AIR - WAREHOUSE AREA

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	2.80E+00	2.3E-01		
1,3,5-Trimethylbenzene	9.50E-01	7.7E-02		
2-Butanone	4.00E+00	3.3E-01		
2-Hexanone	4.00E+00	3.3E-01		
2-Propanol				
4-Ethyltoluene	2.30E+00	1.9E-01		
4-Methyl-2-pentanone				
Acetone	6.80E+01	5.5E+00		
Benzene	2.30E+00	1.9E-01	8.30E-06	1.6E-06
Butadiene, 1,3-	1.90E+00	1.5E-01	3.00E-05	4.6E-06
Carbon disulfide	1.30E+00	1.1E-01		
Carbon tetrachloride	6.30E-01	5.1E-02	1.50E-05	7.7E-07
Chloroform	6.00E-01	4.9E-02	2.30E-05	1.1E-06
Chloromethane	1.30E+00	1.1E-01		
Cyclohexane	3.40E+00	2.8E-01		
Dichlorodifluoromethane	3.20E+00	2.6E-01		
Ethyl benzene	1.20E+00	9.8E-02		
Heptane	2.00E+00	1.6E-01		
Hexane	1.90E+00	1.5E-01		
Isooctane	1.10E+00	9.0E-02		
Methylene chloride	9.40E+00	7.7E-01	4.70E-07	3.6E-07
o-Xylene	1.40E+00	1.1E-01		
Styrene	1.50E+00	1.2E-01		
Tetrachloroethene	9.30E+00	7.6E-01	5.90E-06	4.5E-06
Toluene	1.00E+01	8.2E-01		
Trichloroethene	3.30E-01	2.7E-02	1.10E-04	3.0E-06
Trichlorofluoromethane	5.00E+01	4.1E+00		
Xylene, m/p	3.40E+00	2.8E-01		
		SUMMARY CANCER RISK		**2E-05**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-3
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - ALL CONSTITUENTS DETECTED IN INDOOR AIR - WAREHOUSE AREA

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	2.80E+00	6.4E-01	6.00E+00	1.1E-01
1,3,5-Trimethylbenzene	9.50E-01	2.2E-01	6.00E+00	3.6E-02
2-Butanone	4.00E+00	9.1E-01	5.00E+03	1.8E-04
2-Hexanone	4.00E+00	9.1E-01		
2-Propanol				
4-Ethyltoluene	2.30E+00	5.3E-01		
4-Methyl-2-pentanone			3.00E+03	
Acetone	6.80E+01	1.6E+01		
Benzene	2.30E+00	5.3E-01	3.00E+01	1.8E-02
Butadiene, 1,3-	1.90E+00	4.3E-01	2.00E+00	2.2E-01
Carbon disulfide	1.30E+00	3.0E-01	7.00E+02	4.2E-04
Carbon tetrachloride	6.30E-01	1.4E-01	1.80E+02	8.0E-04
Chloroform	6.00E-01	1.4E-01	4.80E+01	2.9E-03
Chloromethane	1.30E+00	3.0E-01	9.00E+01	3.3E-03
Cyclohexane	3.40E+00	7.8E-01	6.00E+03	1.3E-04
Dichlorodifluoromethane	3.20E+00	7.3E-01	2.00E+02	3.7E-03
Ethyl benzene	1.20E+00	2.7E-01	1.00E+03	2.7E-04
Heptane	2.00E+00	4.6E-01		
Hexane	1.90E+00	4.3E-01	7.00E+02	6.2E-04
Isooctane	1.10E+00	2.5E-01		
Methylene chloride	9.40E+00	2.1E+00	1.00E+03	2.1E-03
o-Xylene	1.40E+00	3.2E-01	1.00E+02	3.2E-03
Styrene	1.50E+00	3.4E-01	1.00E+03	3.4E-04
Tetrachloroethene	9.30E+00	2.1E+00	2.80E+02	7.6E-03
Toluene	1.00E+01	2.3E+00	5.00E+03	4.6E-04
Trichloroethene	3.30E-01	7.5E-02	4.00E+01	1.9E-03
Trichlorofluoromethane	5.00E+01	1.1E+01	7.00E+02	1.6E-02
Xylene, m/p	3.40E+00	7.8E-01	1.00E+02	7.8E-03
		SUMMARY HAZARD INDEX		**4E-01**

NA - not available

TABLE D-4
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-4
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	2.80E+00	2.3E-01		
1,3,5-Trimethylbenzene	9.50E-01	7.7E-02		
2-Butanone	4.00E+00	3.3E-01		
2-Hexanone				
2-Propanol	2.70E+01	2.2E+00		
4-Ethyltoluene	2.30E+00	1.9E-01		
4-Methyl-2-pentanone	3.40E+00	2.8E-01		
Acetone	6.80E+01	5.5E+00		
Benzene	2.30E+00	1.9E-01	8.30E-06	1.6E-06
Butadiene, 1,3-	1.90E+00	1.5E-01	3.00E-05	4.6E-06
Carbon disulfide	1.30E+00	1.1E-01		
Carbon tetrachloride	6.30E-01	5.1E-02	1.50E-05	7.7E-07
Chloroform	6.00E-01	4.9E-02	2.30E-05	1.1E-06
Chloromethane				
Cyclohexane	3.40E+00	2.8E-01		
Dichlorodifluoromethane	3.90E+00	3.2E-01		
Ethyl benzene	1.20E+00	9.8E-02		
Heptane	2.00E+00	1.6E-01		
Hexane	1.90E+00	1.5E-01		
Isooctane				
Methylene chloride	9.40E+00	7.7E-01	4.70E-07	3.6E-07
o-Xylene	1.40E+00	1.1E-01		
Styrene	1.50E+00	1.2E-01		
Tetrachloroethene	9.30E+00	7.6E-01	5.90E-06	4.5E-06
Toluene	1.00E+01	8.2E-01		
Trichloroethene			1.10E-04	
Trichlorofluoromethane	1.30E+02	1.1E+01		
Xylene, m/p	3.40E+00	2.8E-01		
		SUMMARY CANCER RISK		**1E-05**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-4
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	2.80E+00	6.4E-01	6.00E+00	1.1E-01
1,3,5-Trimethylbenzene	9.50E-01	2.2E-01	6.00E+00	3.6E-02
2-Butanone	4.00E+00	9.1E-01	5.00E+03	1.8E-04
2-Hexanone				
2-Propanol	2.70E+01	6.2E+00		
4-Ethyltoluene	2.30E+00	5.3E-01		
4-Methyl-2-pentanone	3.40E+00	7.8E-01	3.00E+03	2.6E-04
Acetone	6.80E+01	1.6E+01		
Benzene	2.30E+00	5.3E-01	3.00E+01	1.8E-02
Butadiene, 1,3-	1.90E+00	4.3E-01	2.00E+00	2.2E-01
Carbon disulfide	1.30E+00	3.0E-01	7.00E+02	4.2E-04
Carbon tetrachloride	6.30E-01	1.4E-01	1.80E+02	8.0E-04
Chloroform	6.00E-01	1.4E-01	4.80E+01	2.9E-03
Chloromethane			9.00E+01	
Cyclohexane	3.40E+00	7.8E-01	6.00E+03	1.3E-04
Dichlorodifluoromethane	3.90E+00	8.9E-01	2.00E+02	4.5E-03
Ethyl benzene	1.20E+00	2.7E-01	1.00E+03	2.7E-04
Heptane	2.00E+00	4.6E-01		
Hexane	1.90E+00	4.3E-01	7.00E+02	6.2E-04
Isooctane				
Methylene chloride	9.40E+00	2.1E+00	1.00E+03	2.1E-03
o-Xylene	1.40E+00	3.2E-01	1.00E+02	3.2E-03
Styrene	1.50E+00	3.4E-01	1.00E+03	3.4E-04
Tetrachloroethene	9.30E+00	2.1E+00	2.80E+02	7.6E-03
Toluene	1.00E+01	2.3E+00	5.00E+03	4.6E-04
Trichloroethene			4.00E+01	
Trichlorofluoromethane	1.30E+02	3.0E+01	7.00E+02	4.2E-02
Xylene, m/p	3.40E+00	7.8E-01	1.00E+02	7.8E-03
		SUMMARY HAZARD INDEX		**5E-01**

NA - not available

TABLE D-5
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - CONSTITUENTS WITH COMPLETE PATHWAYS AND IN EXCESS OF PUBLISHED BACKGROUND/SCREENING VALUES ONL'

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-5
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - CONSTITUENTS WITH COMPLETE PATHWAYS AND IN EXCESS OF PUBLISHED BACKGROUND/SCREENING VALUES ONL

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene				
1,3,5-Trimethylbenzene				
2-Butanone	4.00E+00	3.3E-01		
2-Hexanone				
2-Propanol	2.70E+01	2.2E+00		
4-Ethyltoluene	2.30E+00	1.9E-01		
4-Methyl-2-pentanone	3.40E+00	2.8E-01		
Acetone	6.80E+01	5.5E+00		
Benzene			8.30E-06	
Butadiene, 1,3-	1.90E+00	1.5E-01	3.00E-05	4.6E-06
Carbon disulfide	1.30E+00	1.1E-01		
Carbon tetrachloride			1.50E-05	
Chloroform			2.30E-05	
Chloromethane	9.80E-01	8.0E-02		
Cyclohexane	3.40E+00	2.8E-01		
Dichlorodifluoromethane	3.90E+00	3.2E-01		
Ethyl benzene				
Heptane	2.00E+00	1.6E-01		
Hexane				
Isooctane				
Methylene chloride			4.70E-07	
o-Xylene				
Styrene	1.50E+00	1.2E-01		
Tetrachloroethene			5.90E-06	
Toluene				
Trichloroethene			1.10E-04	
Trichlorofluoromethane				
Xylene, m/p	3.40E+00	2.8E-01		
		SUMMARY CANCER RISK		**5E-06**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-5
INHALATION EXPOSURE TO INDOOR AIR
AMERICAN RECYCLE & MANUFACTURING (ARM) - CONSTITUENTS WITH COMPLETE PATHWAYS AND IN EXCESS OF PUBLISHED BACKGROUND/SCREENING VALUES ONL'

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene			6.00E+00	
1,3,5-Trimethylbenzene			6.00E+00	
2-Butanone	4.00E+00	9.1E-01	5.00E+03	1.8E-04
2-Hexanone				
2-Propanol	2.70E+01	6.2E+00		
4-Ethyltoluene	2.30E+00	5.3E-01		
4-Methyl-2-pentanone	3.40E+00	7.8E-01	3.00E+03	2.6E-04
Acetone	6.80E+01	1.6E+01		
Benzene			3.00E+01	
Butadiene, 1,3-	1.90E+00	4.3E-01	2.00E+00	2.2E-01
Carbon disulfide	1.30E+00	3.0E-01	7.00E+02	4.2E-04
Carbon tetrachloride			1.80E+02	
Chloroform	9.80E-01	2.2E-01	4.80E+01	4.7E-03
Chloromethane			9.00E+01	
Cyclohexane	3.40E+00	7.8E-01	6.00E+03	1.3E-04
Dichlorodifluoromethane	3.90E+00	8.9E-01	2.00E+02	4.5E-03
Ethyl benzene			1.00E+03	
Heptane	2.00E+00	4.6E-01		
Hexane			7.00E+02	
Isooctane				
Methylene chloride			1.00E+03	
o-Xylene			1.00E+02	
Styrene	1.50E+00	3.4E-01	1.00E+03	3.4E-04
Tetrachloroethene			2.80E+02	
Toluene			5.00E+03	
Trichloroethene			4.00E+01	
Trichlorofluoromethane			7.00E+02	
Xylene, m/p	3.40E+00	7.8E-01	1.00E+02	7.8E-03
		SUMMARY HAZARD INDEX		**2E-01**

NA - not available

TABLE D-6
INHALATION EXPOSURE
OUTDOOR AIR (BACKGROUND - FIRTH RIXSON)

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK ($ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-6
INHALATION EXPOSURE
OUTDOOR AIR (BACKGROUND - FIRTH RIXSON)

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	1.00E+00	8.2E-02	x	
2-Propanol	1.40E+00	1.1E-01		
Benzene	1.60E+00	1.3E-01	8.30E-06	1.1E-06
Carbon tetrachloride	6.90E-01	5.6E-02	1.50E-05	8.4E-07
Chloromethane	1.70E+00	1.4E-01		
Dichlorodifluoromethane	3.20E+00	2.6E-01		
Ethyl benzene	8.30E-01	6.8E-02		
Heptane	9.80E-01	8.0E-02		
Hexane	2.30E+00	1.9E-01		
Isooctane	2.00E+00	1.6E-01		
o-Xylene	1.00E+00	8.2E-02		
Toluene	6.00E+00	4.9E-01		
Trichlorofluoromethane	1.60E+00	1.3E-01		
Xylene, m/p	2.30E+00	1.9E-01		
		SUMMARY CANCER RISK		**2E-06**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-6
INHALATION EXPOSURE
OUTDOOR AIR (BACKGROUND - FIRTH RIXSON)

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	1.00E+00	2.3E-01	6.00E+00	3.8E-02
2-Propanol	1.40E+00	3.2E-01		
Benzene	1.60E+00	3.7E-01	3.00E+01	1.2E-02
Carbon tetrachloride	6.90E-01	1.6E-01	1.80E+02	8.8E-04
Chloromethane	1.70E+00	3.9E-01	9.00E+01	4.3E-03
Dichlorodifluoromethane	3.20E+00	7.3E-01	2.00E+02	3.7E-03
Ethyl benzene	8.30E-01	1.9E-01	1.00E+03	1.9E-04
Heptane	9.80E-01	2.2E-01		
Hexane	2.30E+00	5.3E-01	7.00E+02	7.5E-04
Isooctane	2.00E+00	4.6E-01		
o-Xylene	1.00E+00	2.3E-01	1.00E+02	2.3E-03
Toluene	6.00E+00	1.4E+00	5.00E+03	2.7E-04
Trichlorofluoromethane	1.60E+00	3.7E-01	7.00E+02	5.2E-04
Xylene, m/p	2.30E+00	5.3E-01	1.00E+02	5.3E-03
		SUMMARY HAZARD INDEX		**7E-02**

NA - not available

TABLE D-7
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - ALL CONSTITUENTS DETECTED IN INDOOR AIR - OFFICE

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-7
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - ALL CONSTITUENTS DETECTED IN INDOOR AIR - OFFICE

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	1.30E+00	1.1E-01		
1,3,5-Trimethylbenzene				
1,4-Dichlorobenzene	2.60E+01	2.1E+00	6.20E-06	1.3E-05
4-Ethyltoluene				
Acetone	2.30E+01	1.9E+00		
Benzene	1.30E+00	1.1E-01	8.30E-06	8.8E-07
Butadiene, 1,3-			3.00E-05	
Carbon tetrachloride	6.90E-01	5.6E-02	1.50E-05	8.4E-07
Chloromethane	1.60E+00	1.3E-01		
Cyclohexane				
Dichlorodifluoromethane	6.90E+00	5.6E-01		
Ethyl benzene	7.80E-01	6.4E-02		
Heptane	9.80E-01	8.0E-02		
Hexane				
Isooctane	9.30E-01	7.6E-02		
o-Xylene	9.60E-01	7.8E-02		
Styrene				
Toluene	5.70E+00	4.6E-01		
Trichlorofluoromethane	1.80E+00	1.5E-01		
Xylene, m/p	2.60E+00	2.1E-01		
		SUMMARY CANCER RISK		**1E-05**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-7
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - ALL CONSTITUENTS DETECTED IN INDOOR AIR - OFFICE

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	1.30E+00	3.0E-01	6.00E+00	4.9E-02
1,3,5-Trimethylbenzene			6.00E+00	
1,4-Dichlorobenzene	2.60E+01	5.9E+00	8.00E+02	7.4E-03
4-Ethyltoluene				
Acetone	2.30E+01	5.3E+00		
Benzene	1.30E+00	3.0E-01	3.00E+01	9.9E-03
Butadiene, 1,3-			2.00E+00	
Carbon tetrachloride	6.90E-01	1.6E-01	1.80E+02	8.8E-04
Chloromethane	1.60E+00	3.7E-01	9.00E+01	4.1E-03
Cyclohexane			6.00E+03	
Dichlorodifluoromethane	6.90E+00	1.6E+00	2.00E+02	7.9E-03
Ethyl benzene	7.80E-01	1.8E-01	1.00E+03	1.8E-04
Heptane	9.80E-01	2.2E-01		
Hexane			7.00E+02	
Isooctane	9.30E-01	2.1E-01		
o-Xylene	9.60E-01	2.2E-01	1.00E+02	2.2E-03
Styrene			1.00E+03	
Toluene	5.70E+00	1.3E+00	5.00E+03	2.6E-04
Trichlorofluoromethane	1.80E+00	4.1E-01	7.00E+02	5.9E-04
Xylene, m/p	2.60E+00	5.9E-01	1.00E+02	5.9E-03
		SUMMARY HAZARD INDEX		**9E-02**

NA - not available

TABLE D-8
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - ALL CONSTITUENTS DETECTED IN INDOOR AIR - SHIPPING AREA

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-8
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - ALL CONSTITUENTS DETECTED IN INDOOR AIR - SHIPPING AREA

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	7.40E+00	6.0E-01		
1,3,5-Trimethylbenzene	2.00E+00	1.6E-01		
1,4-Dichlorobenzene			6.20E-06	
4-Ethyltoluene	6.40E+00	5.2E-01		
Acetone	3.10E+02	2.5E+01		
Benzene	1.10E+01	9.0E-01	8.30E-06	7.4E-06
Butadiene, 1,3-	6.40E+00	5.2E-01	3.00E-05	1.6E-05
Carbon tetrachloride			1.50E-05	
Chloromethane	1.20E+00	9.8E-02		
Cyclohexane	1.00E+00	8.2E-02		
Dichlorodifluoromethane	3.20E+00	2.6E-01		
Ethyl benzene	6.10E+00	5.0E-01		
Heptane	2.30E+00	1.9E-01		
Hexane	6.30E+00	5.1E-01		
Isooctane	5.10E+00	4.2E-01		
o-Xylene	6.90E+00	5.6E-01		
Styrene	1.70E+00	1.4E-01		
Toluene	1.40E+02	1.1E+01		
Trichlorofluoromethane	1.60E+00	1.3E-01		
Xylene, m/p	2.00E+01	1.6E+00		
		SUMMARY CANCER RISK		**2E-05**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-8
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - ALL CONSTITUENTS DETECTED IN INDOOR AIR - SHIPPING AREA

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	7.40E+00	1.7E+00	6.00E+00	2.8E-01
1,3,5-Trimethylbenzene	2.00E+00	4.6E-01	6.00E+00	7.6E-02
1,4-Dichlorobenzene			8.00E+02	
4-Ethyltoluene	6.40E+00	1.5E+00		
Acetone	3.10E+02	7.1E+01		
Benzene	1.10E+01	2.5E+00	3.00E+01	8.4E-02
Butadiene, 1,3-	6.40E+00	1.5E+00	2.00E+00	7.3E-01
Carbon tetrachloride			1.80E+02	
Chloromethane	1.20E+00	2.7E-01	9.00E+01	3.0E-03
Cyclohexane	1.00E+00	2.3E-01	6.00E+03	3.8E-05
Dichlorodifluoromethane	3.20E+00	7.3E-01	2.00E+02	3.7E-03
Ethyl benzene	6.10E+00	1.4E+00	1.00E+03	1.4E-03
Heptane	2.30E+00	5.3E-01		
Hexane	6.30E+00	1.4E+00	7.00E+02	2.1E-03
Isooctane	5.10E+00	1.2E+00		
o-Xylene	6.90E+00	1.6E+00	1.00E+02	1.6E-02
Styrene	1.70E+00	3.9E-01	1.00E+03	3.9E-04
Toluene	1.40E+02	3.2E+01	5.00E+03	6.4E-03
Trichlorofluoromethane	1.60E+00	3.7E-01	7.00E+02	5.2E-04
Xylene, m/p	2.00E+01	4.6E+00	1.00E+02	4.6E-02
		SUMMARY HAZARD INDEX		**1E+00**

NA - not available

TABLE D-9
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-9
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene	7.40E+00	6.0E-01		
1,3,5-Trimethylbenzene	2.00E+00	1.6E-01		
1,4-Dichlorobenzene	2.60E+01	2.1E+00	6.20E-06	1.3E-05
4-Ethyltoluene	6.40E+00	5.2E-01		
Acetone	3.10E+02	2.5E+01		
Benzene	1.10E+01	9.0E-01	8.30E-06	7.4E-06
Butadiene, 1,3-			3.00E-05	
Carbon tetrachloride			1.50E-05	
Chloromethane				
Cyclohexane	1.00E+00	8.2E-02		
Dichlorodifluoromethane	6.90E+00	5.6E-01		
Ethyl benzene	6.10E+00	5.0E-01		
Heptane	2.30E+00	1.9E-01		
Hexane	6.30E+00	5.1E-01		
Isooctane	5.10E+00	4.2E-01		
o-Xylene	6.90E+00	5.6E-01		
Styrene	1.70E+00	1.4E-01		
Toluene	1.40E+02	1.1E+01		
Trichlorofluoromethane	1.80E+00	1.5E-01		
Xylene, m/p	2.00E+01	1.6E+00		
		SUMMARY CANCER RISK		**2E-05**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-9
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene	7.40E+00	1.7E+00	6.00E+00	2.8E-01
1,3,5-Trimethylbenzene	2.00E+00	4.6E-01	6.00E+00	7.6E-02
1,4-Dichlorobenzene	2.60E+01	5.9E+00	8.00E+02	7.4E-03
4-Ethyltoluene	6.40E+00	1.5E+00		
Acetone	3.10E+02	7.1E+01		
Benzene	1.10E+01	2.5E+00	3.00E+01	8.4E-02
Butadiene, 1,3-			2.00E+00	
Carbon tetrachloride			1.80E+02	
Chloromethane			9.00E+01	
Cyclohexane	1.00E+00	2.3E-01	6.00E+03	3.8E-05
Dichlorodifluoromethane	6.90E+00	1.6E+00	2.00E+02	7.9E-03
Ethyl benzene	6.10E+00	1.4E+00	1.00E+03	1.4E-03
Heptane	2.30E+00	5.3E-01		
Hexane	6.30E+00	1.4E+00	7.00E+02	2.1E-03
Isooctane	5.10E+00	1.2E+00		
o-Xylene	6.90E+00	1.6E+00	1.00E+02	1.6E-02
Styrene	1.70E+00	3.9E-01	1.00E+03	3.9E-04
Toluene	1.40E+02	3.2E+01	5.00E+03	6.4E-03
Trichlorofluoromethane	1.80E+00	4.1E-01	7.00E+02	5.9E-04
Xylene, m/p	2.00E+01	4.6E+00	1.00E+02	4.6E-02
		SUMMARY HAZARD INDEX		**5E-01**

NA - not available

TABLE D-10
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - CONSTITUENTS WITH COMPLETE PATHWAYS AND IN EXCESS OF PUBLISHED BACKGROUND/SCREENING VALUES ONLY

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m^3	Measured
CONVERSION FACTOR 1	CF1	24	hours/day	
EXPOSURE TIME DAILY	ET	8	hours/day	EPA, 2002
EXPOSURE FREQUENCY	EF	250	days/year	EPA, 2002
EXPOSURE DURATION	ED	25	years	EPA, 2002
CONVERSION FACTOR 2	CF2	365	days/year	
AVERAGING TIME CANCER	AT	70	years	EPA, 2002
AVERAGING TIME NONCANCER	AT	25	years	EPA, 2002

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24. Values for indoor commercial/industrial worker.

Prepared by: KJC
Checked by: JHP

EQUATIONS

CANCER RISK = AVG. CONC. (ug/m^3) * CANCER UNIT RISK $(ug/m^3)^{-1}$
HAZARD QUOTIENT = AVG.CONC.(ug/m^3)/REF. CONC. (ug/m^3)

$$\text{AVG. EXPOSURE CONC.} = \frac{[CA]air * EF * ET * ED}{AT * CF1 * CF2}$$

*For noncarcinogenic effects: AT = ED

TABLE D-10
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - CONSTITUENTS WITH COMPLETE PATHWAYS AND IN EXCESS OF PUBLISHED BACKGROUND/SCREENING VALUES ONLY

ARCH CHEMICALS
ROCHESTER, NY

CARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION LIFETIME (ug/m^3)	INHALATION CANCER UNIT RISK $(ug/m^3)^{-1}$	CANCER RISK
1,2,4-Trimethylbenzene				
1,3,5-Trimethylbenzene				
1,4-Dichlorobenzene	2.60E+01	2.1E+00	6.20E-06	1.3E-05
4-Ethyltoluene	6.40E+00	5.2E-01		
Acetone	3.10E+02	2.5E+01		
Benzene	1.10E+01	9.0E-01	8.30E-06	7.4E-06
Butadiene, 1,3-			3.00E-05	
Carbon tetrachloride			1.50E-05	
Chloromethane				
Cyclohexane	1.00E+00	8.2E-02		
Dichlorodifluoromethane	6.90E+00	5.6E-01		
Ethyl benzene	6.10E+00	5.0E-01		
Heptane	2.30E+00	1.9E-01		
Hexane				
Isooctane	5.10E+00	4.2E-01		
o-Xylene	6.90E+00	5.6E-01		
Styrene	1.70E+00	1.4E-01		
Toluene	1.40E+02	1.1E+01		
Trichlorofluoromethane	1.80E+00	1.5E-01		
Xylene, m/p	2.00E+01	1.6E+00		
		SUMMARY CANCER RISK		**2E-05**

NC - not potentially carcinogenic or no unit risk factor available.

TABLE D-10
INHALATION EXPOSURE TO INDOOR AIR
FIRTH RIXSON - CONSTITUENTS WITH COMPLETE PATHWAYS AND IN EXCESS OF PUBLISHED BACKGROUND/SCREENING VALUES ONLY

ARCH CHEMICALS
ROCHESTER, NY

NONCARCINOGENIC EFFECTS

COMPOUND	INDOOR AIR CONCENTRATION (ug/m^3)	AVERAGE AIR CONCENTRATION FOR TIME PERIOD (ug/m^3)	CHRONIC INHALATION RfC [1] (ug/m^3)	HAZARD QUOTIENT
1,2,4-Trimethylbenzene			6.00E+00	
1,3,5-Trimethylbenzene			6.00E+00	
1,4-Dichlorobenzene	2.60E+01	5.9E+00	8.00E+02	7.4E-03
4-Ethyltoluene	6.40E+00	1.5E+00		
Acetone	3.10E+02	7.1E+01		
Benzene	1.10E+01	2.5E+00	3.00E+01	8.4E-02
Butadiene, 1,3-			2.00E+00	
Carbon tetrachloride			1.80E+02	
Chloromethane			9.00E+01	
Cyclohexane	1.00E+00	2.3E-01	6.00E+03	3.8E-05
Dichlorodifluoromethane	6.90E+00	1.6E+00	2.00E+02	7.9E-03
Ethyl benzene	6.10E+00	1.4E+00	1.00E+03	1.4E-03
Heptane	2.30E+00	5.3E-01		
Hexane			7.00E+02	
Isooctane	5.10E+00	1.2E+00		
o-Xylene	6.90E+00	1.6E+00	1.00E+02	1.6E-02
Styrene	1.70E+00	3.9E-01	1.00E+03	3.9E-04
Toluene	1.40E+02	3.2E+01	5.00E+03	6.4E-03
Trichlorofluoromethane	1.80E+00	4.1E-01	7.00E+02	5.9E-04
Xylene, m/p	2.00E+01	4.6E+00	1.00E+02	4.6E-02
		SUMMARY HAZARD INDEX		**2E-01**

NA - not available

Sources of Dose-Response Data

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
1,4-Dichlorobenzene	6.2E-06	NCEA	8.0E-01	IRIS
1,2,4-Trimethylbenzene			6.0E-03	EPA [a]
1,3,5-Trimethylbenzene			6.0E-03	EPA [a]
2-Butanone			5.0E+00	IRIS
2-Hexanone				
2-Propanol				
4-Ethyltoluene				
4-Methyl-2-pentanone			3.0E+00	IRIS
Acetone				
Benzene	8.3E-06	IRIS	3.0E-02	IRIS
1,3-Butadiene	3.0E-05	IRIS	2.0E-03	IRIS
Carbon Disulfide			7.0E-01	IRIS
Carbon Tetrachloride	1.5E-05	IRIS	1.8E-01	MRL [b]
Chlorobenzene			4.9E-02	EPA [b]
Chloroform	2.3E-05	IRIS	4.8E-02	NCEA [b]
Chloromethane			9.0E-02	IRIS
Cyclohexane			6.0E+00	IRIS
Dichlorodifluoromethane			2.0E-01	HEAST
Ethylbenzene			1.0E+00	IRIS
Heptane, N-				
Hexane, N-			7.0E-01	IRIS
Isooctane				
Methylene Chloride	4.7E-07	IRIS	1.0E+00	MRL [b]
Styrene			1.0E+00	IRIS
Tetrachloroethylene	5.9E-06	CALEPA	2.8E-01	MRL [b]
Toluene			5.0E+00	IRIS
Trichloroethylene	1.1E-04	NCEA	4.0E-02	NCEA [b]
Trichlorofluoromethane			7.0E-01	HEAST
Xylene			1.0E-01	IRIS

IRIS – Integrated Risk Information System (April, 2006) [www.epa.gov/iris/]
HEAST – Health Effects Assessment Summary Tables [EPA Region IX PRG Table]
EPA – EPA Provisional Value
NCEA – Derived by National Center for Environmental Assessment
CALEPA – Derived by California EPA [EPA Region IX PRG Table]
[a] – Value obtained from EPA Region IX PRG Table (October, 2004)
[b] – Value obtained from EPA Region III RBC Table (April, 2006)