2008 ONSITE VAPOR INTRUSION SAMPLING

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

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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 the 2008 on-site vapor intrusion sampling program at their Rochester facility.

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).

Beginning in 2005, at the request of the NYSDEC, Arch has been conducting annual vapor intrusion sampling at its Rochester plant. The sampling consists of sub-slab and indoor air samples collected at six locations within the facility buildings, plus one ambient (outdoor) air sample. The sampling event described in this report represents the fourth year of vapor intrusion sampling at the Rochester plant.

1.2 ORGANIZATION OF REPORT

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

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

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

2.0 SAMPLING PROCEDURES

For the 2008 onsite vapor intrusion sampling event, samples were collected using SUMMA® canisters for the analysis of volatile organic compounds (VOCs) and chloropyridines (2-dichloropyridine and 2,6-dichloropyridine). Sampling stations were the same as in previous sampling events, as shown on Figure 2, and used the sub-slab vapor probes installed in 2005. At each indoor location, concurrent sub-slab vapor and indoor air samples were collected. An outdoor (ambient) air sample was also collected concurrently. The samples were collected on March 4, 2008. Meteorological data during the sampling event was obtained from the National Weather Service website 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. These data are provided in Appendix A.

2.1 SAMPLE COLLECTION

Sampling was conducted during a regular daytime working shift at the plant to correspond with the daily exposure period of interest in characterizing risks for commercial/industrial workers. 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 (for connection to the sub-slab sampling probe)
- 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 approximately 8-hr. time-weighted average sample with a final vacuum pressure less than 5 in. Hg.

The following steps were followed when setting up a 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 over tighten 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 will be used, so there is no setting of the flow rate 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 <u>not</u> 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. For sub-slab samples, remove the plug from the sampling probe and install the barbed connector onto the probe. Connect a length of new Teflon tubing from the probe to the inlet of the sample train.
7. Once all connections are complete, 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 all data on sampling times and canister readings (see Appendix A, Field Data Records). Other observations and field notes were recorded in the field log book.

For quality control purposes, a duplicate sample was collected at one indoor air sampling location.

3.0 RESULTS

Samples were analyzed for VOCs and chloropyridines by Con-Test Analytical Laboratory in East Longmeadow, Massachusetts. VOCs and chloropyridines were analyzed using USEPA Method TO-15 with standard reporting limits. The list of analytes reflects the laboratory's standard TO-15 reporting list, plus 2-chloropyridine and 2,6-dichloropyridine.

The laboratory analytical reports for the VOCs and chloropyridines 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 for VOCs (including 2-chloropyridine and 2,6-dichloropyridine) 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.

Acetone, isopropanol, and 2-butanone are reported in the method blank associated with samples SG-08-193 and OA-08-002. Action limits were established at ten times the reported blank concentration for acetone and 2-butanone, and five times the reported blank concentration for isopropanol. Results for acetone, isopropanol, and 2-butanone are greater than the action limits; no further action was required.

Acetone and ethanol are reported in the method blank associated with samples IA-08-001, IA-08-002, IA-08-002DUP, IA-08-003, IA-08-004, IA-08-005, IA-08-006, SG-08-188, S-08-190, SG-08-191, and SG-08-192. Action limits were established at ten times the reported blank concentration for acetone and five times the reported blank concentration for ethanol. Results for acetone and ethanol are greater than the action limits; no further action was required.

Acetone, ethanol, and propene are reported in the method blank associated with samples SG-08-189. Action limits were established at ten times the reported blank concentration for acetone, and five times the reported blank concentration for ethanol and propylene. Results for acetone, ethanol, and propene are greater than the action limits; no further action was required.

In the initial calibration, the average relative standard deviation (RSD) for acetone (30.7), methylene chloride (46), and benzyl chloride (35.8) exceed the quality control (QC) limit of 30. The laboratory performed a linear regression for methylene chloride; no further action was required. The results for acetone and benzyl chloride were qualified estimated (J/UJ).

In the initial calibration, the average relative response factor for 2,6-dichloropyridine (0.017) is less than the QC limit of 0.050 for specified target compounds. Performance evaluation samples (LCS) are within QC limits. 2,6-dichloropyridine is a low responder under the TO-15 method. The laboratory performed an acceptable evaluation of the performance of this analyte. No further action was required.

In the continuing calibration, the percent difference for chloromethane (26.5) and trichlorofluoromethane (27.6) exceed the QC limit of 25. The results for chloromethane and trichlorofluoromethane were qualified estimated (J/UJ).

A filed duplicate was collected for sample IA-08-002. The relative percent difference (RPD) between the sample and duplicate analysis for ethyl acetate (124), 4-methyl-2-pentanone (71), and tetrahydrofuran (63) exceed the quality control (QC) limit of 50. The result for ethyl acetate, 4-methyl-2-pentanone, and tetrahydrofuran in samples IA-08-002 and IA-08-002DUP were qualified estimated (J/UJ)

The results for 2-chloropyridine in samples IA-08-006, SG-08-190, SG-08-191, and SG-08-193,

and 2,6-dichloropyridine in sample IA-08-006 exceed the verified linear calibration range and were qualified estimated (J). Dilution and reanalysis were not performed by the lab.

The case narrative states the reporting limit for sample IA-08-002 was raised due to possible contamination of the canister.

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 be present in indoor air as a result of sub-slab soil gas intrusion into the indoor air and which also pose a potential health risk. 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 and risk-based values. The background data used in this analysis include the outdoor air samples collected during the air sampling events in 2005 through 2008, as well as ranges of indoor air VOC concentrations developed through a NYSDOH study of homes (1997 – 2003) presented in NYSDOH guidance (NYSDOH, 2006). Air Guideline Values are derived by NYSDOH and are published for methylene chloride, tetrachloroethene, and trichloroethene (NYSDOH, 2006). Risk-based values are derived by USEPA and are published in USEPA Vapor Intrusion guidance (USEPA, 2002a).

Table 1 presents the analytical indoor air and soil gas data and comparison to risk-based screening levels. The risk-based screening levels used for data comparisons in Table 1 are based on values published by USEPA in the "Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soil" (USEPA, 2002a). The screening levels developed by USEPA are based on residential exposures (i.e., continuous exposures) and are protective for an excess lifetime cancer risk of $1x10^{-6}$ and a hazard index of 1. As shown in Table 1, risk-based screening levels that are protective for worker exposures (i.e., exposures 8 hours per day, 5 days per week) were derived from the USEPA-published residential screening values. The worker-based screening levels, rather than the residential-based screening levels, were used for the evaluation of the indoor air and soil gas data because residential screening levels are not applicable for the Arch manufacturing facility. The shaded values in Table 1 indicate that detected concentrations in each of the areas sampled exceed risk-based screening levels for workers,

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.

Indoor air samples were collected from three areas within the Building: An office (Office), the Warehouse Area (Warehouse), and the Production Area (Production Area). Each of these areas may be occupied daily by workers at the facility. 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 a single area for a full work-day, each work-day, over their duration of employment at the facility. Consequently, it was assumed that exposure to indoor air at each area (i.e., office, warehouse, production) 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) for indoor air at each area are the arithmetic mean concentrations of all air samples collected from within the area, over the four rounds of sampling (April,2005; March 2006; March 2007; March 2008). Use of the arithmetic mean concentrations as EPCs are appropriate because:

- Workers move throughout a given work area during the day and, therefore, are exposed to air throughout the area (i.e., they are not stationary at a single point in the Warehouse or Production area, but rather move throughout those areas). In reality, workers likely move throughout the entire facility and are, therefore, likely only exposed to air at a given area (e.g., warehouse) a portion of each day.
- Air is a dynamic medium that is constantly in motion due to mechanical ventilation of the buildings. Consequently, the concentrations measured at a single point in a given area do not represent the concentrations that occur throughout the area.
- Consideration of indoor air concentrations measured during the four rounds of air sampling provides an estimate of the long-term air concentrations workers may potentially be exposed to.

Arithmetic mean concentrations were calculated using a value of one-half the sample quantitation limit for results reported as non-detect (i.e., a value equal to one-half the "U" qualified value was used in the averaging). For analytes reported in fewer than the four rounds of sampling that have been performed, the average concentrations were calculated using the available data.

The Office Area EPCs are represented by the average concentrations reported in samples from location IA-001. The Production Area EPCs are represented by the average concentrations in samples from locations IA-002, IA-003, and IA-004. The Warehouse EPCs are represented by the average concentrations reported in samples IA-005 and IA-006.

The background concentrations were represented by the average concentrations reported in samples from the outdoor location (OA-001).

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), and USEPA Health Effects Assessment Summary Tables (HEAST). URF and RfC values for 2-chloropyridine and 2,6-dichloropyridine are not published in USEPA sources, but were developed by Arch in support of on-going environmental investigations at the facility. The risk calculations referred to in this analysis are presented in Appendix D.

Pathway Completeness Evaluation. Although employees may be exposed to all of the constituents detected in indoor air samples, not all constituents detected in indoor air are present as a result of vapor intrusion from subsurface sources. In order for the presence of a constituent in indoor air to be attributable to vapor intrusion from subsurface sources, the constituent must be present in both soil gas and indoor air samples collected during the same sampling event. In addition, constituents present in indoor air solely due to vapor intrusion typically exhibit concentrations at least 100-fold lower than their corresponding soil gas concentrations (USEPA, 2002).

The pathway completeness evaluation for each of the areas within the Main Plant Building is presented in the risk characterization findings. The pathway completeness evaluation was used to identify the constituents detected in indoor air for which a potentially complete vapor intrusion pathway may exist. Of the constituents with potentially complete vapor intrusion pathways, the detected indoor air concentrations were compared to published background values, NYSDOH Air Guideline Values, and risk-based indoor air screening levels. Health risks were evaluated for the constituents with indoor air concentrations in excess of the highest of these values, as follows:

1) Health risks were calculated for all of the constituents;
2) Health risks were calculated for only the constituents detected in indoor air that are not associated with manufacturing operations at the facility;
3) Health risks to workers/employees were evaluated for the constituents detected in indoor air that are known to be associated with manufacturing operations via comparison of detected concentrations to worker exposure limits (PELs).

3.2.2 Risk Characterization Findings

The results of the risk characterization are summarized below for each general area of the Main Plant Building.

Office Area. Table 2 presents the pathway completeness evaluation and risk analysis for the indoor air quality at the Office Area. A review of Table 2 indicates that the vapor intrusion pathway is potentially complete for sixteen constituents. However, only two of these constituents (2-chloropyridine and ethylbenzene) were detected at concentrations greater than the highest of the background, air guideline, and risk-based values, while a third (2-propanol) does not have any published screening value.

The concentration of 2-chloropyridine in indoor air is greater than the risk-based screening value and site-specific outdoor concentration, and there are no published background values for 2-chloropyridine. However, 2-chloropyridine is manufactured at the facility. The indoor air concentration measured in March, 2008 (4.7 ug/m^3) is lower than the concentrations measured in March 2006 and March 2007 (24 to 27 ug/m^3) (Table 2). The soil gas concentration measured in March 2008 (4.9 ug/m^3) is nearly equal to the indoor air concentration. If the presence of 2-chloropyridine in indoor air at the office location was due to vapor intrusion, the soil gas concentration would likely be at least 10 to 100-times greater than the indoor air concentration. Collectively, this suggests that the presence of 2-chloropyridine in indoor air is due to the use and manufacture of the chemical at the facility, and not due to vapor intrusion.

The cancer risk associated with inhalation exposure to 2-chloropyridine in indoor air at the Office Area is 9E-06 and the hazard index is 0.4. However, since 2-chloropyridine is used/manufactured at the facility and is not likely present in indoor air due to vapor intrusion, the most appropriate method for evaluating potential health risks to workers is via workplace exposure limits. The detected indoor air concentration of 4.7 ug/m^3 is well below the Arch workplace air standard of 2,300 ug/m^3.

2-Propanol is likely present due to ambient conditions. The concentrations detected in indoor air (9.7 ug/m^3) and soil gas (4.8 ug/m^3) in March 2008 are nearly equal to each other. There are no dose-response values for 2-propanol; therefore, potential risks cannot be assessed.

Ethylbenzene was also detected in indoor air (0.4 ug/m3) and soil gas (1.1 ug/m3) at similar concentrations in March 2008, suggesting that the presence of ethylbenzene air is not likely attributable to vapor intrusion. The HI associated with ethylbenzene is 0.005.

In summary, there are only two constituents (2-chloropyridine and ethylbenzene) detected in indoor air at the Office Area that may be present as a result of vapor intrusion and which were detected in indoor air at concentrations exceeding the background, air guideline, and risk-based values. However, the presence of 2-chloropyridine in indoor air is most likely due to its use/manufacture at the facility. The measured concentration in indoor air is two-orders of magnitude lower than the Arch workplace air standard. The health risk associated with constituents that are not directly related to use and manufacturing (i.e., ethylbenzene) is insignificant, as indicated by a hazard index of 0.005.

Warehouse Area. Table 3 presents the pathway completeness evaluation and risk analysis for the indoor air quality at the Warehouse Area. A review of Table 3 indicates that the vapor intrusion pathway is potentially complete for 23 constituents. Of these, six constituents were detected at maximum concentrations above published background values, NYSDOH air guideline values, and/or risk-based screening values (2-chloropyridine, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, carbon tetrachloride, chloroform, and ethylbenzene), and two do not have any published screening values (2-propanol and 4-ethyltoluene). These eight constituents are further evaluated in this risk analysis.

A review of the Warehouse Area soil gas and indoor air concentrations presented in Table 3 indicates that for these constituents, indoor air concentrations were generally higher than soil gas concentrations in the March 2008 sampling round. This suggests that the presence of these constituents in indoor air cannot be solely attributable to vapor intrusion, because even under ideal equilibrium conditions the soil gas and indoor air concentrations would only equal each other. Moreover, 2-chloropyridine and 2,6-dichloropyridine are manufactured and stored at the facility, and chloroform is a manufacturing process-related contaminant that is present in facility wastewater. This suggests that the presence of these three constituents in indoor air is most likely due to the use and storage of the constituents at the facility, and not to vapor intrusion.

The health risks associated with inhalation exposures to all eight of the constituents evaluated in this risk analysis is a cancer risk of 3E-04 and a hazard index of 23. Virtually all of the cancer risk and the majority of the non-cancer risk is associated with 2-chloropyridine. The health risks associated with constituents that are not directly related to use and manufacturing at the facility (trimethylbenzenes, 2-propanol, 4-ethyltoluene, carbon tetrachloride, ethylbenzene) is a hazard index of 10 (due to trimethylbenzenes); none of these constituents are potentially carcinogenic.

The trimethylbenzenes in the warehouse are potentially linked to the routine presence of trucks at the loading docks, since trimethylbenzenes are known constituents of diesel exhaust and petroleum products.

Given that the facility is an operating chemical manufacturing plant and that none of the eight constituents evaluated in this risk analysis for the Warehouse Area are likely present in indoor air as a result of vapor intrusion, the most appropriate method for evaluating potential health risks to workers is via workplace exposure limits. The following table presents a comparison of the indoor air EPCs at the Warehouse Area to OSHA Permissible Exposure Limits (PELs).

Constituent	EPC (mg/m^3)	PEL (mg/m^3)
2-Chloropyridine	0.57	Not available; however, Arch's company indoor air monitoring threshold is 2.3
1,2,4-Trimethylbenzene	0.187	Not available
1,3,5-Trimethylbenzene	0.077	Not available
2-Propanol	0.174	Not available
4-Ethyltoluene	0.086	Not available
Carbon tetrachloride	0.00092	2.0
Chloroform	0.013	240
Ethylbenzene	0.036	435

In summary, there are 23 constituents detected in indoor air at the Warehouse Area that may be present as a result of vapor intrusion, but only six of which were detected at concentrations greater than background values, NYDOH air guideline values, or risk-based values (2-chloropyridine, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, carbon tetrachloride, chloroform, and ethylbenzene), while two others do not have any of these screening values (4-ethyltoluene, and 2-propanol). Since the indoor air concentrations of all of these constituents are greater than the soil gas concentrations and at least two of the constituents (2-chloropyridine and chloroform) are manufactured or are present in materials used at the facility, it is unlikely that the presence of these constituents in indoor air is due to vapor intrusion. The indoor air concentrations of these constituents are well below their workplace air standards.

Production Area. Table 4 presents the pathway completeness evaluation and risk analysis for the indoor air quality at the Production Area. A review of Table 4 indicates that the vapor intrusion pathway is potentially complete for 27 constituents. Of these, 18 constituents were detected at maximum concentrations below published background values, NYSDOH air guideline values, and/or risk-based screening values. Of the remaining nine constituents, seven were detected at

concentrations greater than these screening values (2-chloropyridine, 2,6-dichloropyridine, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, carbon tetrachloride, chloroform, and ethylbenzene) and two do not have screening values (4-ethyltoluene and 2-propanol). These nine constituents are further evaluated in this risk analysis.

A review of the soil gas and indoor air concentrations presented in Table 4 indicates that for these constituents, indoor air concentrations were generally lower than soil gas concentrations in the March, 2008 sampling round. This suggests that, conceptually, the presence of these constituents in indoor air could be attributable to vapor intrusion. However, a comparison of soil gas and indoor air concentrations indicates that for 2,6-dichloropyridine, the soil gas concentrations are similar to the indoor air concentrations, whereas for the other eight constituents the soil gas concentrations are generally 50 to 500 times greater than the indoor air concentrations. 2-Chloropyridine and 2,6-dichloropyridine are manufactured and stored at the facility, and chloroform is a manufacturing process-related contaminant. This suggests that the presence of these constituents in indoor air is most likely due to the use and storage of the constituents at the facility, and not to vapor intrusion.

The health risks associated with inhalation exposures to all nine of the constituents at the Production Area is a cancer risk of 4E-04 and a hazard index of 16. Virtually all of the cancer risk and the majority of the non-cancer risk is associated with chloropyridines. The health risks associated with constituents that are not directly related to use and manufacturing at the facility (primarily carbon tetrachloride and trimethylbenzenes) are a cancer risk of 2E-06 and a hazard index of 0.9.

Given that the facility is an operating chemical manufacturing plant and that the chloropyridines are manufactured at the facility, the most appropriate method for evaluating potential health risks to workers is via workplace exposure limits. The following table presents a comparison of the indoor air EPCs at the Production Area to PELs.

Constituent	EPC (mg/m^3)	PEL (mg/m^3)
2-Chloropyridine	0.592	Not available; however, Arch's company indoor air monitoring threshold is 2.3
2,6-Dichloropyridine	0.078	Not available; assumed to be similar to 2-chloropyridine
1,2,4-Trimethylbenzene	0.017	Not available
1,3,5-Trimethylbenzene	0.006	Not available
2-Propanol	1.058	Not available
4-Ethyltoluene	0.018	Not available
Carbon tetrachloride	0.0002	2.0
Chloroform	0.01	240
Ethylbenzene	0.013	435

In summary, there are 27 constituents detected in indoor air at the Production Area that may be present as a result of vapor intrusion, but only seven of which were detected at concentrations greater than background values, NYDOH air guideline values, or risk-based values (2-chloropyridine, 2,6-dichloropyridine, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, carbon tetrachloride, chloroform, and ethylbenzene). The use/manufacture of chloropyridines and chloroform at the facility, suggests that their presence in indoor air is not due to vapor intrusion. The differences in soil gas concentrations of other constituents (e.g., trimethylbenzenes, carbon tetrachloride) suggest that their presence in indoor air may be attributable to vapor intrusion. However, health risks associated with these constituents are negligible (a cancer risk of 2E-06 and a hazard index of 0.9). Moreover, the indoor air concentrations of all of these constituents are well below their workplace air standards.

4.0 CONCLUSIONS

The results of 2008 on-site vapor intrusion sampling event indicate that the following chemicals may be present in indoor air as a result of soil gas intrusion, 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:

Office Area:	2-chloropyridine
Warehouse Area:	2-chloropyridine, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and chloroform
Production Area:	2-chloropyridine, 2,6-dichloropyridine, carbon tetrachloride, and chloroform

However, comparison of soil gas and indoor air data for these compounds suggests that the primary source of these compounds in indoor air at the Office Area and Warehouse Area is not soil gas. Of the chemicals listed above, only carbon tetrachloride is not associated with current activities at the facility, but the risks posed by carbon tetrachloride are minimal (carcinogenic risk of 3E-06 or less; HI values well below 1). The trimethylbenzenes detected in the Warehouse Area exhibit HI values greater than 1, but their source is uncertain. The very low levels of trimethylbenzenes detected in the sub-slab samples in the warehouse indicate that vapor intrusion is not the source of the indoor air detections. Arch does not have any records of chemical materials used on site that contain trimethylbenzenes; however, it has been speculated that diesel exhaust from trucks using the warehouse loading docks may be responsible for the measured concentrations. For the other chemicals that are associated with current activities, all are well below their applicable worker protection thresholds. Indoor air quality is monitored annually by Arch as part of its industrial health and safety program.

As was the case with the 2005, 2006, and 2007 sampling, soil vapor concentrations were generally found to be highest under the building slab in the chemical production area of the plant, and diminish rapidly toward the south (i.e., under the warehouse building) and to the northwest (i.e., beneath the office area). As was noted in 2007, chloropyridine concentrations in sub-slab vapor samples beneath the warehouse are somewhat elevated; however, soil vapor sampling conducted in late 2007 along the southerly Arch property line confirmed that off-site migration of chloropyridines in soil gas is not occurring at levels of concern (MACTEC, 2008).

The monitoring conducted over the past four years has established that vapor intrusion is not a significant exposure pathway for workers at the Arch facility.

5.0 REFERENCES

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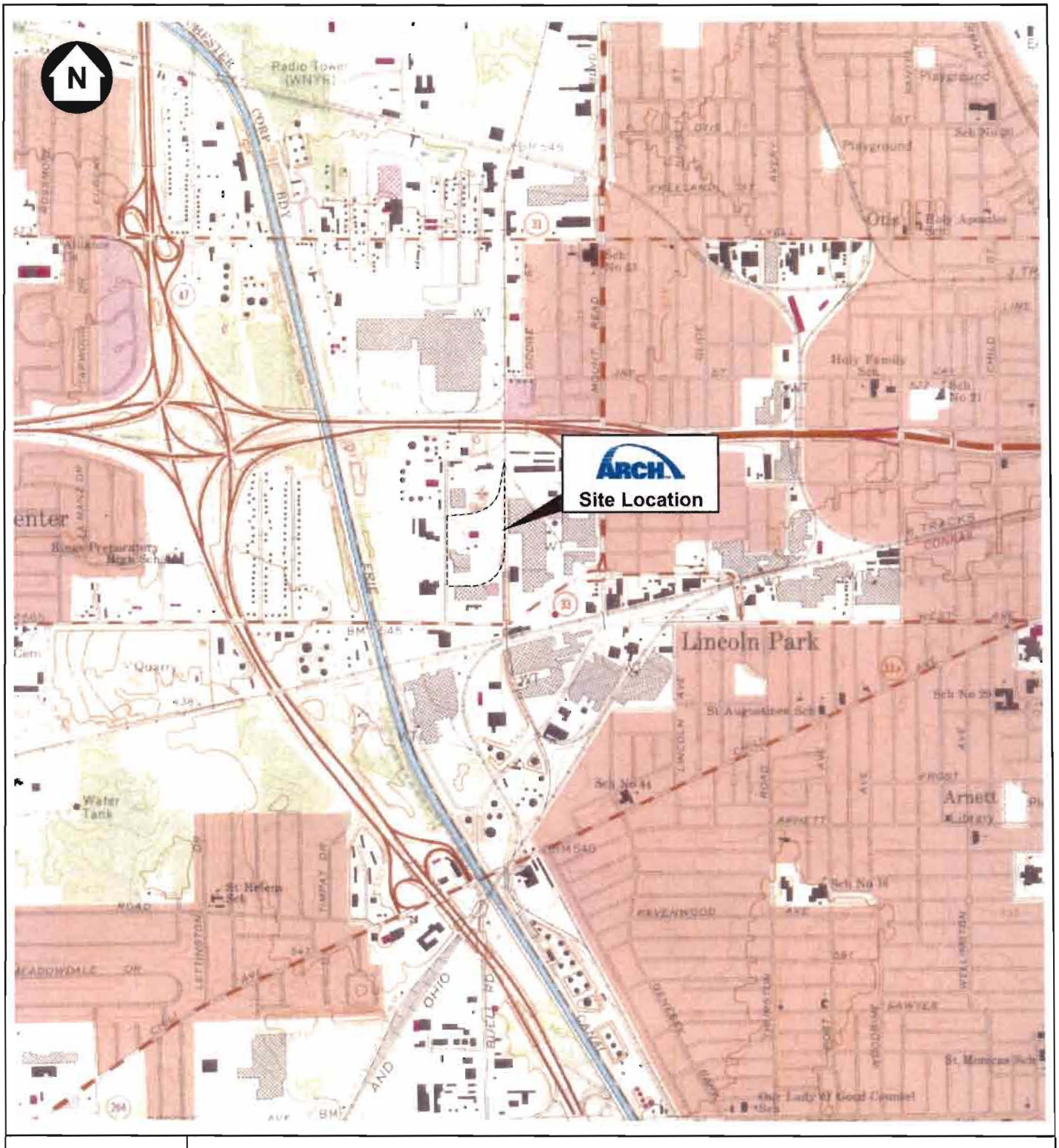
FIGURES



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

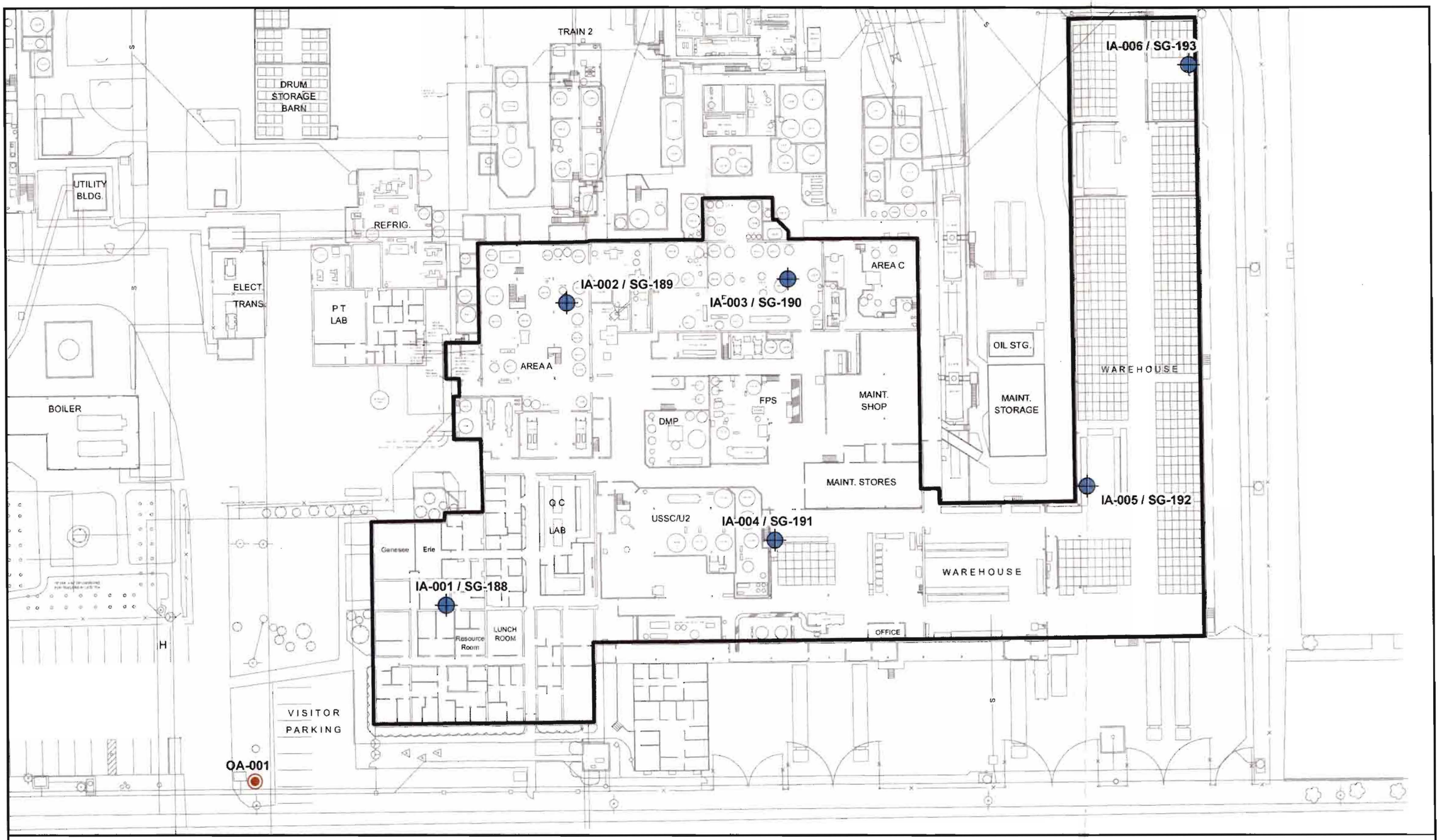
Scale in Feet

0 2,000 4,000

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

MACTEC

W2003035b.cdr



Legend

Indoor / Subslab Samples

Outdoor Air Sample

N

0 25 50 Feet

Prepared by BRP | Checked by JEB

VaporIntrusionStudy_11x17LS.mxd Figure2.pdf

Figure 2
Onsite Sampling Locations
Vapor Intrusion Study
Arch Chemicals
Rochester, NY
MACTEC, Inc.

TABLES

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

	Risk-Based Screening Values		Air Samples											
			office				production area							
	Indoor Air Generic (Residential)	Indoor Air Commercial/ Industrial	IA-001 4/6/05	IA-001 3/2/06	IA-001 3/14/07	IA-001 3/4/08	IA-002 4/6/05	IA-002 3/2/06	IA-002 3/14/07	IA-002 3/4/08	IA-003 4/6/05	IA-003 3/2/06	IA-003 3/14/07	IA-003 3/4/08
2,6-Dichloropyridine		1.63		1.1	4	3.1		22	100 U	95		97	100 U	330
2-Chloropyridine		1.63		24	24	4.7		1500	590	340		550	950	350
1,1,1-Trichloroethane	2200	9636		1.1 U	0.68 U	0.25 U		1.1 U	0.22 U	0.99 U		1.1 U	0.37	0.25 U
1,1,2,2-Tetrachloroethane	0.042	0.22		1.4 U	1.8 U	0.31 U		1.4 U	0.56 U	1.3 U		1.4 U	0.28 U	0.31 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	30000	131400		1.5 U	2 U	0.54		1.5 U	0.64 U	1.4 U		1.5 U	0.55	0.58
1,1,2-Trichloroethane	0.15	0.79		1.1 U	1.3 U	0.25 U		1.1 U	0.4 U	0.99 U		1.1 U	0.2 U	0.25 U
1,1-Dichloroethane	500	2190		0.81 U	1 U	0.18 U		0.81 U	0.32 U	0.73 U		0.81 U	0.16 U	0.18 U
1,1-Dichloroethene	200	876		0.79 U	1 U	0.18 U		0.79 U	0.32 U	0.72 U		0.79 U	0.24	0.18 U
1,2,4-Trichlorobenzene	200	876		3.7 UJ	1.8 U	0.67 U		3.7 UJ	0.56 U	1.4 U		3.7 UJ	0.28 U	0.67 U
1,2,4-Trimethylbenzene	6.0	26.3		0.98 U	2.9	0.68		74	0.4 U	4.5		16	2.7	2.2
1,2-Dibromoethane	0.011	0.058		1.5 U	2 U	0.35 U		1.5 U	0.64 U	1.4 U		1.5 U	0.32 U	0.35 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane				1.4 U	1.8 U	0.32 U		1.4 U	0.56 U	1.3 U		1.4 U	0.28 U	0.32 U
1,2-Dichlorobenzene	200	876		1.2 U	1.5 U	0.27 U		1.2 U	0.48 U	1.1 U		1.2 U	0.24 U	0.27 U
1,2-Dichloroethane	0.094	0.49	0.16 U	0.81 U	1 U	0.18 U	0.4 U	0.81 U	0.32 U	0.73 U	0.13 U	0.81 U	0.16 U	0.18 U
1,2-Dichloroethene (total)	--	--	0.16 U	0.79 U			0.4 U	0.79 U			0.13 U	0.79 U		
1,2-Dichloropropane	4.0	17.5		0.92 U	1.3 U	0.21 U		0.92 U	0.4 U	0.84 U		0.92 U	0.2 U	0.21 U
1,3,5-Trimethylbenzene	6.0	26.3		0.98 U	1.3 U	0.23 U		29	0.4 U	1.7		5.9	0.88	0.68
1,3-Dichlorobenzene	110	482		1.2 U	1.5 U	0.27 U		1.2 U	0.48 U	1.1 U		1.2 U	0.24 U	0.27 U
1,4-Dichlorobenzene	800	3504		1.2 U	1.5 U	0.27 U		1.2 U	0.48 U	1.1 U		1.2 U	0.24 U	0.27 U
1,4-Dioxane				R				R				R		
2-Butanone	1000	4380		1.5 U	4.3	1.6		1.5 U	21	5.3		3.8 U	8	17
2-Chlorotoluene				1 U				1 U				1 U		
2-Hexanone				2 U	1 U	0.18 U		2 U	0.32 U	1.1		2 U	0.46	0.18
2-Propanol				12 U	220	9.7		12 U	16	18		12 U	25	3500
4-Ethyltoluene				0.98 U	1.3 U	0.23 U		88	0.4 U	1.5		18	1	0.7
4-Methyl-2-pentanone	80	350		2 U	2.5	0.18 U		2 U	1.8	0.76		2 U	5.2	1.1
Acetone	350	1533		12 U	33	15		12 U	64	25		33	16	22
Allyl chloride				1.6 U				1.6 U				1.6 U		
Benzene	0.31	1.6	1.9	0.64 U	0.75 U	0.92	0.73	0.64 U	0.87	3.2	1.1	0.93	1.3	1.3
Benzyl chloride	0.05	0.3			1.3 U	0.24 U			0.4 U	0.94 U			0.2 U	0.24 U
Bromodichloromethane	0.14	0.74	0.27 U	1.3 U	1.8 U	0.3 U	0.67 U	1.3 U	0.56 U	1.3 U	0.22 U	1.3 U	0.28 U	0.3 U
Bromoform	2.2	11.6	0.41 U	2.1 UJ		0.46 U	1 U	2.1 UJ		1.9 U	0.34 U	2.1 UJ		0.46 U
Bromomethane	5.0	21.9		0.78 U	1 U	0.18 U		0.78 U	0.32 U	0.7 U		0.78 U	0.16 U	0.18 U
Butadiene, 1,3-	0.0087	0.046		1.1 U	0.5 U	0.1 U		1.1 U	0.16 U	0.4 U		1.1 U	0.08 U	0.1 U
Carbon Disulfide	700	3066	1.6 U	1.6 U	0.75 U	0.21	1.6 U	1.6 U	0.4	0.57 U	1.6 U	1.6 U	0.27	0.94
Carbon Tetrachloride	0.16	0.84	0.63 J	1.3 U	0.78 U	0.41	0.69	1.3 UJ	1.2	1.3	4.3	5.2 J	4.8	2
Chlorobenzene	60	263	0.92 U	0.92 U	1.3 U	0.21 U	6	1.2	0.4 U	0.83 U	0.92 U	0.92 U	0.53	0.21 U
Chlorodibromomethane	0.1	0.53	0.34 U	1.7 U	2.3 U	0.39 U	0.85 U	1.7 U	0.72 U	1.6 U	0.28 U	1.7 U	0.36 U	0.39 U
Chloroethane	10000	43800		0.53 U	1.3 U	0.12 U		0.53 U	0.4 U	0.48 U		0.53 U	0.2 U	0.12 U
Chloroform	0.11	0.58	0.2 U	0.98 U	1.3 U	0.38	2.2	15	12	4.7	2.7	27	6.3	12
Chloromethane	2.4	12.6	1.4	1 U	0.5 U	0.76	1.6	1 U	3.9	1.4	1.6	1.5	1	0.95
Cis-1,2-Dichloroethene	35	153		0.79 U	1 U	0.18 U		0.79 U	0.32 U	0.72 U		0.79 U	0.16 U	0.18 U
cis-1,3-Dichloropropene	0.61	3.2		0.91 U	1.3 U	0.2 U		0.91 U	0.4 U	0.82 U		0.91 U	0.2 U	0.2 U
Cyclohexane				0.69 U	0.75 U	0.77		0.69 U	0.24 U	0.63 U		0.69 U	0.12 U	0.3
Dichlorodifluoromethane	200	876		2.6 J	1.3 U	3		2.5 UJ	2.7	2.9		4.9 J	2.2	2.5
Ethanol					410	81			75	8.5			61	11
Ethyl acetate	3200	14016			1.8 U	0.17 U			0.56 U	0.73			0.28 U	2.3
Ethylbenzene	2.2	11.6	1.4 J	0.87 U	2.7	0.4	30	3.1 U	0.32 U	2.2	0.91 J	1 U	2.9	0.85
Heptane				0.82 U	1.3	0.43		0.82 U	0.56	0.74 U		0.82 U	0.38	0.42
Hexachlorobutadiene	0.11	0.58		2.1 UJ	2.8 U	0.48 U		2.1 UJ	0.88 U	2 U		2.1 UJ	0.44 U	0.48 U
Hexane	200	876		1.8 U	1 U	3.6		1.8 U	1	1.7		1.8 U	1	2
Isooctane				0.93 U				0.93 U				0.93 U		
Methyl Tertbutyl Ether	3000	13140		1.8 U	1 U	0.17 U		1.8 U	0.32 U	0.65 U		1.8 U	0.16 U	0.17 U
Methylene Chloride	5.2	27.3	5.6 J	1.7 U	1.4	5.3	11 J	1.7 U	5.4	2.3	5.9 J	1.7	2.1	10
o-Xylene	7000	30660		0.87 U	2.8	0.43		0.87 U	0.32 U	3		0.87 U	3.8	0.74

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

	Risk-Based Screening Values		Air Samples											
			office				production area							
	Indoor Air Generic (Residential)	Indoor Air Commercial/ Industrial	IA-001 4/6/05	IA-001 3/2/06	IA-001 3/14/07	IA-001 3/4/08	IA-002 4/6/05	IA-002 3/2/06	IA-002 3/14/07	IA-002 3/4/08	IA-003 4/6/05	IA-003 3/2/06	IA-003 3/14/07	IA-003 3/4/08
Propylene					0.5 U	0.31 U			0.16 U	0.31 U			0.08 U	0.31 U
Styrene	1000	4380		0.85 U	1.2	0.21		0.85 U	0.32 U	0.97		0.85 U	0.29	0.26
t-Butyl alcohol				15 U				15 U				15 U		
Tetrachloroethene	0.81	4.3	0.52	1.4 U	0.85 U	0.31 U	2.3	2.3	0.28 U	1.3 U	0.95	1.5	1.1	0.56
Tetrahydrofuran				15 U	1.5 U	0.14 U		15 U	28	0.63		15 U	12	9.8
Toluene	400	1752	11 J	0.94 U	22	3.6	4.1 J	1.5 U	0.32 U	6.6	4.9 J	2.5 U	13	4.8
trans-1,2-Dichloroethene	70	307		0.79 U	1 U	0.18 U		0.79 U	0.32 U	0.72 U		0.79 U	0.16 U	0.18 U
trans-1,3-Dichloropropene	0.61	3.2		0.91 U	1.3 U	0.2 U		0.91 U	0.4 U	0.82 U		0.91 U	0.2 U	0.2 U
Trichloroethene	0.022	0.12	0.41	1.1 U	0.68 U	0.25 U	0.54 U	1.1 U	0.22 U	0.97 U	0.7	1.1 U	0.11 U	0.56
Trichlorofluoromethane	700	3066		3.9	11	7.3		1.1 U	1.8	1.5		2	1.6	1.5
Vinyl acetate	200	876			1 U	0.17 U			0.32 U	0.64 U			0.16 U	0.17 U
Vinyl bromide				0.87 U				0.87 U				0.87 U		
Vinyl Chloride	0.28	1.5	0.1 U	0.51 U	0.75 U	0.12 U	0.26 U	0.51 U	0.24 U	0.47 U	0.084 U	0.51 U	0.12 U	0.12 U
Xylene, m/p	7000	30660		2.2 U	8.9	1.2		2.5 U	0.32 U	7.8		2.2 U	12	2.4
Xylenes, Total	7000	30660		0.87 U				2.6 U				0.87 U		

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

The values for 2-chloropyridine and 2,6-dichloropyridine are derived using a unit risk value of 6.2E-06 (Arch, January 2005) and commercial/industrial parameters (8 hours per day, 250 days per year, 25 years).

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

	Air Samples (cont)															
	production area (cont)				warehouse								outdoor			
	IA-004 4/6/05	IA-004 3/2/06	IA-004 3/14/07	IA-004 3/4/08	IA-005 4/6/05	IA-005 3/2/06	IA-005 3/14/07	IA-005 3/4/08	IA-006 4/6/05	IA-006 3/2/06	IA-006 3/14/07	IA-006 3/4/08	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08
2,6-Dichloropyridine		12	22	20		0.43 U	50	9.7		0.48	960	570		0.46 U	1.2 U	2
2-Chloropyridine		450	580	23		4.5	380	24		10	1200	1800		2.3 U	2.5	4.7
1,1,1-Trichloroethane		1.1 U	0.35	0.25 U		1.1 U	0.11 U	0.25 U		2.7 U	0.68 U	0.25 U		1.1 U	0.68 U	0.25 U
1,1,2,2-Tetrachloroethane		1.4 U	0.28 U	0.31 U		1.4 U	0.28 U	0.31 U		3.4 U	1.8 U	0.31 U		1.4 U	1.8 U	0.31 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.5 U	0.58	0.6		1.5 U	0.55	0.59		3.8 U	2 U	0.57		1.5 U	2 U	0.66
1,1,2-Trichloroethane		1.1 U	0.2 U	0.25 U		1.1 U	0.2 U	0.25 U		2.7 U	1.3 U	0.25 U		1.1 U	1.3 U	0.25 U
1,1-Dichloroethane		0.81 U	0.16 U	0.18 U		0.81 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.81 U	1 U	0.18 U
1,1-Dichloroethene		0.79 U	0.16 U	0.18 U		0.79 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.79 U	1 U	0.18 U
1,2,4-Trichlorobenzene		3.7 UJ	0.28 U	0.67 U		3.7 UJ	0.28 U	0.67 U		9.6 U	1.8 U	0.67 U		3.7 U	1.8 U	0.67 U
1,2,4-Trimethylbenzene		44	4.3	4.1		69	29	40		15	670	300		1.5	1.3 U	0.58
1,2-Dibromoethane		1.5 U	0.32 U	0.35 U		1.5 U	0.32 U	0.35 U		3.8 U	2 U	0.35 U		1.5 U	2 U	0.35 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane		1.4 U	0.28 U	0.32 U		1.4 U	0.28 U	0.32 U		3.5 U	1.8 U	0.32 U		1.4 U	1.8 U	0.32 U
1,2-Dichlorobenzene		1.2 U	0.24 U	0.27 U		1.2 U	0.24 U	0.27 U		3 U	1.5 U	0.27 U		1.2 U	1.5 U	0.27 U
1,2-Dichloroethane	0.065	0.81 U	0.16 U	0.18 U	0.081 U	0.81 U	0.16 U	0.18 U	0.25 U	2 U	1 U	0.18 U	0.16 U	0.81 U	1 U	0.18 U
1,2-Dichloroethene (total)	0.04 U	0.79 U			0.079 U	0.79 U			0.25 U	2 U			0.16 U	0.79 U		
1,2-Dichloropropane		0.92 U	0.2 U	0.21 U		0.92 U	0.2 U	0.21 U		2.3 U	1.3 U	0.21 U		0.92 U	1.3 U	0.21 U
1,3,5-Trimethylbenzene		17	1.5	1.5		25	10	13		5.9	260	150		0.98 U	1.3 U	0.23 U
1,3-Dichlorobenzene		1.2 U	0.24 U	0.27 U		1.2 U	0.24 U	0.27 U		3 U	1.5 U	0.27 U		1.2 U	1.5 U	0.27 U
1,4-Dichlorobenzene		1.2 U	0.24 U	0.27 U		1.2 U	0.24 U	0.27 U		3 U	1.5 U	0.27 U		1.2 U	1.5 U	0.27 U
1,4-Dioxane		R				R				47 U				18 U		
2-Butanone		1.5 U	94	4.5		1.5 U	4.2	5.6		3.8 U	52	10		1.5 U	2.4	4.9
2-Chlorotoluene		1 U				1 U				2.6 U				1 U		
2-Hexanone		2 U	0.16 U	0.32		2 U	0.29	0.39		5.3 U	1 U	0.18 U		2 U	1 U	0.81
2-Propanol		29	5900	25		79	480	41		100	310	37		12 U	3.8	2.4
4-Ethyltoluene		54	1.6	0.92		59	12	11		17	290	130		1.3	1.3 U	0.27
4-Methyl-2-pentanone		2 U	2.4	0.36		2 U	1.5	0.18 U		5.3 U	1 U	0.66		2 U	1.6	0.32
Acetone		36	35	78		86	33	40		74	360	120		12 U	14	66
Allyl chloride		1.6 U				1.6 U				4.1 U				1.6 U		
Benzene	1.5	1.1	1.3	1.1	1.6	0.99	1.1	1.2	1.5	1.6 U	1.6	1.7	1.7	2.4	1.1	1.7
Benzyl chloride			0.2 U	0.24 U			0.2 U	0.24 U			1.3 U	0.24 U			1.3 U	0.24 U
Bromodichloromethane	0.067 U	1.3 U	0.28 U	0.3 U	0.13 U	1.3 U	0.28 U	0.3 U	0.42 U	3.4 U	1.8 U	0.3 U	0.27 U	1.3 U	1.8 U	0.3 U
Bromoform	0.1 U	2.1 UJ		0.46 U	0.21 U	2.1 UJ		0.46 U	0.64 U	5.2 U		0.46 U	0.41 U	2.1 U		0.46 U
Bromomethane		0.78 U	0.16 U	0.18 U		0.78 U	0.16 U	0.18 U		1.9 U	1 U	0.18 U		0.78 U	1 U	0.18 U
Butadiene, 1,3-		1.1 U	0.08 U	0.1 U		1.1 U	0.08 U	0.1 U		2.9 U	0.5 U	0.1 U		1.1 U	0.5 U	0.1 U
Carbon Disulfide	1.6 U	1.6 U	0.16	0.15 U	1.6 U	1.6 U	0.12 U	0.15 U	1.6 U	4 U	0.75 U	0.72	1.6 U	1.6 U	0.75 U	0.15 U
Carbon Tetrachloride	0.69	1.3 UJ	0.55	0.5	0.69	1.3 UJ	0.53	0.54	0.82	3.1 U	0.78 U	1.5	0.57	1.3 U	0.78 U	0.46
Chlorobenzene	0.92 U	0.92 U	0.2 U	0.21 U	0.92 U	0.92 U	0.2 U	0.21 U	0.92 U	2.3 U	1.3 U	0.21 U	0.92 U	0.92 U	1.3 U	0.21 U
Chlorodibromomethane	0.085 U	1.7 U	0.36 U	0.39 U	0.17 U	1.7 U	0.36 U	0.39 U	0.53 U	4.3 U	2.3 U	0.39 U	0.34 U	1.7 U	2.3 U	0.39 U
Chloroethane		0.53 U	0.2 U	0.12 U		0.53 U	0.2 U	0.12 U		1.3 U	1.3 U	0.12 U		0.53 U	1.3 U	0.12 U
Chloroform	1.8	35	2.9	1.2	0.41	2.5	0.49	0.95	0.98	6.3	3.3	87	0.2 U	0.98 U	2.1	6.6
Chloromethane	1.2	1.3	1	0.96	1.5	1.3	0.97	0.85	1.9	2.7 U	0.5 U	0.09 U	1 U	1.4	0.5 U	0.89
Cis-1,2-Dichloroethene		0.79 U	0.16 U	0.18 U		0.79 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.79 U	1 U	0.18 U
cis-1,3-Dichloropropene		0.91 U	0.2 U	0.2 U		0.91 U	0.2 U	0.2 U		2.3 U	1.3 U	0.2 U		0.91 U	1.3 U	0.2 U
Cyclohexane		0.69 U	0.12 U	0.62		0.69 U	0.12 U	0.58		1.7 U	0.95	2.8		0.69 U	0.75 U	1.9
Dichlorodifluoromethane		4.9 J	2	2.5		4.9 J	0.3	2.5		6.4 U	1.3 U	2.4		3.4	1.3 U	2.6
Ethanol			0.16 U	91			38	90			340	180			33	5.3
Ethyl acetate			0.28 U	2.6			5.4	22			1.8 U	0.17 U			1.8 U	0.46
Ethylbenzene	1.2 J	2.6 U	5.7	0.94	2.6 J	1.7 U	2.5	1.7	6.1 J	2.9 U	6.3	2.4	0.61	1.1 U	2.4	0.68
Heptane		1.3	1	0.7		3.6	4.6	2.4		3.2	14	1.6		0.86	1 U	0.57
Hexachlorobutadiene		2.1 UJ	0.44 U	0.48 U		2.1 UJ	0.44 U	0.48 U		5.3 U	2.8 U	0.48 U		2.1 U	2.8 U	0.48 U
Hexane		1.8 U	1.4	2		1.8 U	2.1	0.17 U		6.3	3.1	240		2.4	1 U	3.1
Isooctane		0.93 U				0.93 U				2.3 U				1.9		
Methyl Tertbutyl Ether		1.8 U	0.16 U	0.17 U		1.8 U	0.16 U	0.17 U		4.7 U	1 U	0.17 U		1.8 U	1 U	0.17 U
Methylene Chloride	6.3 J	2.2	2	6.3	5.6 J	1.7 U	1.2	0.85	25	280	13	110	5.6 J	1.7 U	3.2	0.16 U
o-Xylene		1.4 U	6	1.2		1.3 U	2.9	1.7		2.2 U	6.3	7.4		1.4 U	2.3	0.69

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

	Air Samples (cont)															
	production area (cont)				warehouse								outdoor			
	IA-004 4/6/05	IA-004 3/2/06	IA-004 3/14/07	IA-004 3/4/08	IA-005 4/6/05	IA-005 3/2/06	IA-005 3/14/07	IA-005 3/4/08	IA-006 4/6/05	IA-006 3/2/06	IA-006 3/14/07	IA-006 3/4/08	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08
Propylene			0.08 U	0.31 U			0.08 U	0.31 U			0.5 U	0.31 U			0.5 U	0.31 U
Styrene		0.85 U	0.49	0.25		0.85 U	0.43	0.25		2.1 U	1 U	1.3		0.85 U	1 U	0.19 U
t-Butyl alcohol		15 U				15 U				39 U				15 U		
Tetrachloroethene	0.53	1.4 U	0.79	0.73	0.6	1.4 U	0.43	0.31 U	0.5	3.4 U	0.85 U	0.6	0.36	1.4 U	0.85 U	1
Tetrahydrofuran		15 U	100	0.41		15 U	0.72	0.34		38 U	1.5 U	0.89		15 U	1.5 U	0.14 U
Toluene	3.3 J	3.3 U	21	4	6 J	7.2 U	14	6.2	6.4 J	8.3 U	22	5.8	4.5 J	6.4 U	17	6.2
trans-1,2-Dichloroethene		0.79 U	0.16 U	0.18 U		0.79 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.79 U	1 U	0.18 U
trans-1,3-Dichloropropene		0.91 U	0.2 U	0.2 U		0.91 U	0.2 U	0.2 U		2.3 U	1.3 U	0.2 U		0.91 U	1.3 U	0.2 U
Trichloroethene	0.32	1.1 U	0.3	0.25 U	0.33	1.1 U	0.11 U	0.25 U	0.49	2.7 U	0.68 U	0.25 U	0.21 U	1.1 U	0.68 U	0.25 U
Trichlorofluoromethane		2.1	1.6	1.5		2.5	1.9	2		2.8 U	2.7	1.9		1.7	1.5	1.1
Vinyl acetate			1.8	0.17 U			1.4	0.17 U			1 U	0.17 U			1 U	0.17 U
Vinyl bromide		0.87 U				0.87 U				2.2 U				0.87 U		
Vinyl Chloride	0.026 U	0.51 U	0.12 U	0.12 U	0.051 U	0.51 U	0.12 U	0.12 U	0.16 U	1.3 U	0.75 U	0.12 U	0.1 U	0.51 U	0.75 U	0.12 U
Xylene, m/p		4.8 U	19	3.6		4.8 U	8.7	4.3		5.6 U	15	6.7		3.7 U	7.7	2.3
Xylenes, Total		6.5 U				6.1 U				2.2 U				5.2 U		

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

The values for 2-chloropyridine and 2,6-dichloropyridine are derived using a unit risk value of 6.2E-06 (Arch, January 2005) and commercial/industrial parameters (8 hours per day, 250 days per year, 25 years).

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

	Risk-Based Screening Values		Soil Gas Samples											
			office				production area							
	Soil Gas Generic (Residential)	Soil Gas Commercial/ Industrial	SG-188 (IA-001) 4/6/05	SG-188 (IA-001) 3/2/06	SG-188 (IA-001) 3/14/07	SG-188 (IA-001) 3/4/08	SG-189 (IA-002) 4/6/05	SG-189 (IA-002) 3/2/06	SG-189 (IA-002) 3/14/07	SG-189 (IA-002) 3/4/08	SG-190 (IA-003) 4/6/05	SG-190 (IA-003) 3/2/06	SG-190 (IA-003) 3/14/07	SG-190 (IA-003) 3/4/08
2,6-Dichloropyridine		16.3		0.43 U	10 U	2.2 U		26	110	2500 U		5300	220	240
2-Chloropyridine		16.3		13	34	4.9		460	700	6400		360000	920	74000
1,1,1-Trichloroethane	22000	96360		1.1 U	5.4 U	0.49 U		1700 U	54 U	540 U		65 U	5.4 U	22 U
1,1,2,2-Tetrachloroethane	0.42	2.2		1.4 U	14 U	0.62 U		2200 U	180	680 U		82 U	14 U	28 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	300000	1314000		1.5 U	16 U	0.69 U		2500 U	160 U	760 U		92 U	16 U	31 U
1,1,2-Trichloroethane	1.5	7.9		1.1 U	10 U	0.49 U		1700 U	100 U	540 U		65 U	10 U	22 U
1,1-Dichloroethane	5000	21900		0.81 U	8 U	0.36 U		1300 U	80 U	400 U		49 U	8 U	16 U
1,1-Dichloroethene	2000	8760		0.79 U	8 U	0.36 U		1500	80 U	400 U		83	110	170
1,2,4-Trichlorobenzene	2000	8760		3.7 UJ	14 U	1.4 U		5900 U	140 U	1500 U		220 U	14 U	60 U
1,2,4-Trimethylbenzene	60	263		0.98 U	10 U	4.4		1600 U	100 U	2000		59 U	10 U	20 U
1,2-Dibromoethane	0.11	0.58		1.5 U	16 U	0.69 U		2500 U	160 U	760 U		92 U	16 U	31 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane				1.4 U	14 U	0.63 U		2200 U	140 U	700 U		84 U	14 U	28 U
1,2-Dichlorobenzene	2000	8760		1.2 U	12 U	0.54 U		1900 U	120 U	600 U		72 U	12 U	24 U
1,2-Dichloroethane	0.94	4.9	0.81 U	0.81 U	8 U	0.36 U	8100 U	1300 U	80 U	400 U	81 U	49 U	8 U	16 U
1,2-Dichloroethene (total)	--	--	0.79 U	0.79 U			7900 U	1300 U			79 U	48 U		
1,2-Dichloropropane	40	175		0.92 U	10 U	0.42 U		1500 U	100 U	460 U		55 U	10 U	19 U
1,3,5-Trimethylbenzene	60	263		0.98 U	10 U	0.86		1600 U	100 U	590		59 U	10 U	20 U
1,3-Dichlorobenzene	1100	4818		1.2 U	12 U	0.54 U		1900 U	120 U	600 U		72 U	12 U	24 U
1,4-Dichlorobenzene	8000	35040		1.2 U	12 U	0.54 U		1900 U	120 U	600 U		72 U	12 U	24 U
1,4-Dioxane				R				29000 U				1100 U		
2-Butanone	10000	43800		1.5 U	6 U	11		2400 U	60 U	920		88 U	92	120
2-Chlorotoluene				1 U				1700 U				62 U		
2-Hexanone				2 U	8 U	0.36 U		3300 U	80 U	400 U		120 U	8 U	16 U
2-Propanol				12 U	180000	4.8		34000	2700	240000		3700	6600	18
4-Ethyltoluene				0.98 UJ	10 U	1.7		1600 U	100 U	520		59 U	10 U	20 U
4-Methyl-2-pentanone	800	3504		2 U	8 U	0.36 U		3300 U	80 U	400 U		120 U	8 U	16 U
Acetone	3500	15330		12 UJ	4 U	22		19000 U	40 U	12000		710 U	76	93
Allyl chloride				1.6 U				2500 U				94 U		
Benzene	3.1	16	1.5	0.64 U	6 U	0.74	6400 U	1000 U	1500	3800	210	93	130	160
Benzyl chloride	0.5	3			10 U	0.47 U			100 U	520 U			10 U	21 U
Bromodichloromethane	1.4	7.4	1.3 U	1.3 U	14 U	0.6 U	13000 U	2100 U	140 U	660 U	130 U	80 U	14 U	27 U
Bromoform	22	116	2.1 U	2.1 UJ		0.92 U	21000 U	3300 U		1100 U	210 U	120 U		41 U
Bromomethane	50	219		0.78 U	8 U	0.35 U		1200 U	80 U	380 U		47 U	8 U	16 U
Butadiene, 1,3-	0.087	0.46		1.1 U	4 U	0.2 U		1800 U	40 U	220 U		66 U	4 U	8.8 U
Carbon Disulfide	7000	30660	5.6 J	1.6 U	6 U	0.29 U	50000	2500 U	330	5800	160 U	170	42	84
Carbon Tetrachloride	1.6	8.4	1.3 U	1.3 UJ	6.2 U	0.56 U	13000 U	2000 U	62 U	620 U	8800	4300	230	380
Chlorobenzene	600	2628	0.92 U	0.92 U	10 U	0.42 U	9200 U	1500 U	270	1500	830	1000	1000	4700
Chlorodibromomethane	1.0	5.3	1.7 U	1.7 U	18 U	0.78 U	17000 U	2700 U	180 U	860 U	170 U	100 U	18 U	35 U
Chloroethane	100000	438000		0.53 U	10 U	0.24 U		840 U	550	1300		32 U	10 U	11 U
Chloroform	1.1	5.8	1.4	0.98 U	10 U	1	980000	250000	470000	2E+06	18000	8800	4900	7600
Chloromethane	24	126	1 U	1 U	4 U	0.29	10000 U	1700 U	78	720	100 U	62 U	4 U	8 U
Cis-1,2-Dichloroethene	350	1533		0.79 U	8 U	0.36 U		1300 U	80 U	400 U		48 U	14	18
cis-1,3-Dichloropropene	6.1	32.0		0.91 U	10 U	0.4 U		1500 U	100 U	440 U		54 U	10 U	18 U
Cyclohexane				0.69 U	6 U	0.31 U		130000	150000	350000		93	6 U	110
Dichlorodifluoromethane	2000	8760		2.5 UJ	10 U	3.1		4000 U	100 U	1600		150 U	10 U	20 U
Ethanol					8 U	13			1500	12000			8 U	16
Ethyl acetate	32000	140160			14 U	0.33 U			140 U	360 U			14 U	15 U
Ethylbenzene	22	116	3.3 J	0.87 U	8 U	1.1	8700 U	1400 U	110	1300	87 U	52 U	10	24
Heptane				0.82 U	8 U	0.36 U		2000	1400	4000		49 U	24	16 U
Hexachlorobutadiene	1.1	5.8		2.1 UJ	22 U	0.96 U		3400 U	220 U	1100 U		130 U	22 U	43 U
Hexane	2000	8760		1.8 U	8 U	0.73		35000	48000	83000		110 U	49	36
Isooctane				0.93 UJ				1500 U				56 U		
Methyl Tertbutyl Ether	30000	131400		1.8 U	8 U	0.33 U		2900 U	80 U	360 U		110 U	8 U	15 U
Methylene Chloride	52	273	1.7 U	1.7 U	10	0.31 U	130000	5900	7600	38000	520	110	92	14 U
o-Xylene	70000	306600		0.87 U	8 U	0.82		1400 U	80 U	1000		52 U	8 U	22

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

	Risk-Based Screening Values		Soil Gas Samples											
			office				production area							
	Soil Gas Generic (Residential)	Soil Gas Commercial/ Industrial	SG-188 (IA-001) 4/6/05	SG-188 (IA-001) 3/2/06	SG-188 (IA-001) 3/14/07	SG-188 (IA-001) 3/4/08	SG-189 (IA-002) 4/6/05	SG-189 (IA-002) 3/2/06	SG-189 (IA-002) 3/14/07	SG-189 (IA-002) 3/4/08	SG-190 (IA-003) 4/6/05	SG-190 (IA-003) 3/2/06	SG-190 (IA-003) 3/14/07	SG-190 (IA-003) 3/4/08
Propylene					4 U	0.62 U			40 U	5600			4 U	45
Styrene	10000	43800		0.85 U	8 U	0.38 U		1400 U	80 U	2600		51 U	8 U	53
t-Butyl alcohol				15 U				24000 U				910 U		
Tetrachloroethene	8.1	43	1.4 U	1.4 U	6.8 U	0.62 U	88000	21000	9000	57000	6300	5600	3200	11000
Tetrahydrofuran				15 U	12 U	0.27 U		24000 U	120 U	300 U		880 U	12 U	12 U
Toluene	4000	17520	45 J	1.5 U	8 U	7.7	57000	9400 U	8100	64000	410	240 U	220	390
trans-1,2-Dichloroethene	700	3066		0.79 U	8 U	0.36 U		1300 U	80 U	400 U		48 U	8 U	16 U
trans-1,3-Dichloropropene	6.1	32.0		0.91 U	10 U	0.4 U		1500 U	100 U	440 U		54 U	10 U	18 U
Trichloroethene	0.22	1.2	1.1 U	7 J	5.4 U	0.49 U	11000 U	3400	4000	10000	160	170	98	130
Trichlorofluoromethane	7000	30660		3.8 J	12 U	8.6		1900	120 U	1900		67 U	12 U	23 U
Vinyl acetate	2000	8760			8 U	0.33 U			80 U	360 U			13	15 U
Vinyl bromide				0.87 U				1400 U				52 U		
Vinyl Chloride	2.8	14.7	0.51 U	0.51 U	6 U	0.24 U	5100 U	1400	2200	3500	89	38	56	76
Xylene, m/p	70000	306600		2.2 U	8 U	4		3500 U	190	3200		130 U	26	66
Xylenes, Total	70000	306600		0.87 U				1400 U				52 U		

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

The values for 2-chloropyridine and 2,6-dichloropyridine are derived using a unit risk value of 6.2E-06 (Arch, January 2005) and commercial/industrial parameters (8 hours per day, 250 days per year, 25 years).

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

	Soil Gas Samples (cont)											
	production area (cont)				warehouse							
	SG-191 (IA-004) 4/6/05	SG-191 (IA-004) 3/2/06	SG-191 (IA-004) 3/14/07	SG-191 (IA-004) 3/4/08	SG-192 (IA-005) 4/6/05	SG-192 (IA-005) 3/2/06	SG-192 (IA-005) 3/14/07	SG-192 (IA-005) 3/4/08	SG-193 (IA-006) 4/6/05	SG-193 (IA-006) 3/2/06	SG-193 (IA-006) 3/14/07	SG-193 (IA-006) 3/4/08
2,6-Dichloropyridine		8	10 U	98 U		1.9	31	2.2 U		0.72	9.1	98 U
2-Chloropyridine		270	26	1700		40	420	9.4		13	1000	5100
1,1,1-Trichloroethane		440 U	5.4 U	22 U		1.1 U	0.54 U	0.49 U		1.1 U	0.68 U	0.49 U
1,1,2,2-Tetrachloroethane		550 U	14 U	28 U		1.4 U	1.4 U	0.62 U		1.4 U	1.8 U	0.62 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		610 U	16 U	31 U		1.5 U	1.6 U	0.69 U		1.5 U	2 U	0.69 U
1,1,2-Trichloroethane		440 U	10 U	22 U		1.1 U	1 U	0.49 U		1.1 U	1.3 U	0.49 U
1,1-Dichloroethane		320 U	8 U	16 U		0.81 U	0.8 U	0.36 U		0.81 U	1 U	0.36 U
1,1-Dichloroethene		320 U	8 U	16 U		0.79 U	0.8 U	0.36 U		0.79 U	1 U	0.36 U
1,2,4-Trichlorobenzene		1500 U	14 U	60 U		3.7 UJ	1.4 U	1.4 U		3.7 U	1.8 U	1.4 U
1,2,4-Trimethylbenzene		390 U	10 U	20 U		9.8	18	0.97		4.1	40	8.5
1,2-Dibromoethane		610 U	16 U	31 U		1.5 U	1.6 U	0.69 U		1.5 U	2 U	0.69 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane		560 U	14 U	28 U		1.4 U	1.4 U	0.63 U		1.4 U	1.8 U	0.63 U
1,2-Dichlorobenzene		480 U	12 U	24 U		1.2 U	1.2 U	0.54 U		1.2 U	1.5 U	0.54 U
1,2-Dichloroethane	400 U	320 U	19	16 U	0.81 U	0.81 U	0.8 U	0.36 U	0.81 U	0.81 U	1 U	0.36 U
1,2-Dichloroethene (total)	400 U	320 U			0.79 U	0.79 U			0.79 U	0.79 U		
1,2-Dichloropropane		370 U	10 U	19 U		0.92 U	1 U	0.42 U		0.92 U	1.3 U	0.42 U
1,3,5-Trimethylbenzene		390 U	10 U	20 U		3.5	6.2	0.45 U		1.3	19	6.2
1,3-Dichlorobenzene		480 U	12 U	24 U		1.2 U	1.2 U	0.54 U		1.2 U	1.5 U	0.54 U
1,4-Dichlorobenzene		480 U	12 U	24 U		1.2 U	1.2 U	0.54 U		1.2 U	1.5 U	0.54 U
1,4-Dioxane		7200 U				R				18 U		
2-Butanone		590 U	6 U	19 U		1.6 U	2.8	2.1		1.8 U	5.8	6.6
2-Chlorotoluene		410 U				1 U				1 U		
2-Hexanone		820 U	8 U	16 U		2 U	0.8 U	0.36 U		2 U	1 U	0.36 U
2-Propanol		7600	4100	9.6 U		12 U	15000	2		12 U	61000	38
4-Ethyltoluene		390 U	10 U	20 U		8.8	7.2	0.45 U		4.6	26	6.4
4-Methyl-2-pentanone		820 U	8 U	16 U		2 U	0.8 U	0.36 U		2 U	1 U	2.9
Acetone		4800 U	46	56		12 U	94	24		12 U	170	65
Allyl chloride		630 U				1.6 U				1.6 U		
Benzene	320 U	260 U	6 U	13 U	2.4	0.64 U	0.64	0.52	0.73	0.64 U	0.75 U	1.1
Benzyl chloride			10 U	21 U			1 U	0.47 U			1.3 U	0.47 U
Bromodichloromethane	670 U	540 U	120	81	1.3 U	1.3 U	1.4 U	0.6 U	1.3 U	1.3 U	1.8 U	0.6 U
Bromoform	1000 U	830 U		41 U	2.1 U	2.1 UJ		0.92 U	2.1 U	2.1 U		0.92 U
Bromomethane		310 U	8 U	16 U		0.78 U	0.8 U	0.35 U		0.78 U	1 U	0.35 U
Butadiene, 1,3-		440 U	4 U	8.8 U		1.1 U	0.4 U	0.2 U		1.1 U	0.5 U	0.2 U
Carbon Disulfide	1000	620	6 U	13 U	4.4 J	1.6 U	0.6 U	0.29 U	3.7 J	1.6 U	0.75 U	0.29 U
Carbon Tetrachloride	630 U	500 U	200	110	1.8	1.3 J	0.62 U	0.88	1.3 U	1.3 U	0.78 U	0.67
Chlorobenzene	460 U	370 U	10 U	19 U	0.92 U	0.92 U	1 U	0.42 U	0.92 U	0.92 U	1.3 U	0.42 U
Chlorodibromomethane	850 U	680 U	18 U	35 U	1.7 U	1.7 U	1.8 U	0.78 U	1.7 U	1.7 U	2.3 U	0.78 U
Chloroethane		210 U	10 U	11 U		0.53 U	1 U	0.24 U		3.2	1.3 U	0.24 U
Chloroform	73000	42000	51000	25000	0.98 U	0.98 U	1.3	1.5	0.98 U	1	1.3 U	0.88
Chloromethane	520 U	410 U	4 U	8 U	2.9	1 U	0.4 U	0.18 U	1 U	1 U	0.5 U	0.18 U
Cis-1,2-Dichloroethene		320 U	8 U	16 U		0.79 U	0.8 U	0.36 U		0.79 U	1 U	0.36 U
cis-1,3-Dichloropropene		360 U	10 U	18 U		0.91 U	1 U	0.4 U		0.91 U	1.3 U	0.4 U
Cyclohexane		280 U	6 U	14 U		0.69 U	0.6 U	0.31 U		0.69 U	3.9	0.31 U
Dichlorodifluoromethane		990 U	10 U	20 U		5.4 J	1 U	2.5		3	1.3 U	2.3
Ethanol			8 U	31			0.8 U	6.3			1 U	56
Ethyl acetate			14 U	15 U			1.4 U	0.33 U			1.8 U	7.7
Ethylbenzene	430 U	350 U	8 U	18 U	6.1 J	1.1 U	5.1	0.83	6.9 J	1.5 U	6.5	1.7
Heptane		330 U	14	16 U		0.82 U	5.1	0.36 U		0.82 U	9.7	0.6
Hexachlorobutadiene		850 U	22 U	43 U		2.1 UJ	2.2 U	0.96 U		2.1 U	2.8 U	0.96 U
Hexane		700 U	8 U	15 U		1.8 U	1.9	1.2		1.8 U	1 U	0.33 U
Isooctane		370 U				0.93 U				0.93 U		
Methyl Tertbutyl Ether		720 U	8 U	15 U		1.8 U	0.8 U	0.33 U		1.8 U	1 U	0.33 U
Methylene Chloride	2700	690 U	6 U	14 U	1.7 U	1.7 U	1.1	0.88	1.7 U	19	0.75 U	0.31 U
o-Xylene		350 U	8 U	18 U		1 U	5.8	0.55		1.3 U	8.3	1.4

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

	Soil Gas Samples (cont)											
	production area (cont)				warehouse							
	SG-191 (IA-004) 4/6/05	SG-191 (IA-004) 3/2/06	SG-191 (IA-004) 3/14/07	SG-191 (IA-004) 3/4/08	SG-192 (IA-005) 4/6/05	SG-192 (IA-005) 3/2/06	SG-192 (IA-005) 3/14/07	SG-192 (IA-005) 3/4/08	SG-193 (IA-006) 4/6/05	SG-193 (IA-006) 3/2/06	SG-193 (IA-006) 3/14/07	SG-193 (IA-006) 3/4/08
Propylene			4 U	28 U			0.4 U	0.62 U			0.5 U	0.62 U
Styrene		340 U	8 U	17 U		0.85 U	0.8 U	0.38 U		0.85 U	1 U	0.38 U
t-Butyl alcohol		6100 U				15 U				15 U		
Tetrachloroethene	1600	540 U	140	120	6.5	3.3	1.8	7.1	1.4 U	1.4 U	0.85 U	0.62 U
Tetrahydrofuran		5900 U	12 U	12 U		15 U	1.2 U	0.27 U		15 U	1.5 U	0.27 U
Toluene	720	1100 U	8 U	16 U	68 J	3.8 U	8.2	6.4	49 J	6 U	6.2	9.2
trans-1,2-Dichloroethene		320 U	8 U	16 U		0.79 U	0.8 U	0.36 U		0.79 U	1 U	0.36 U
trans-1,3-Dichloropropene		360 U	10 U	18 U		0.91 U	1 U	0.4 U		0.91 U	1.3 U	0.4 U
Trichloroethene	540 U	430 U	180	110	1.1 U	1.1 U	0.54 U	0.49 U	1.1 U	1.1 U	0.68 U	0.49 U
Trichlorofluoromethane		450 U	12 U	23 U		2.1	2	1.7		1.7	1.7	1
Vinyl acetate			8 U	15 U			0.8 U	0.33 U			1 U	0.33 U
Vinyl bromide		350 U				0.87 U				0.87 U		
Vinyl Chloride	260 U	200 U	6 U	11 U	0.51 U	0.51 U	0.6 U	0.24 U	0.51 U	0.51 U	0.75 U	0.24 U
Xylene, m/p		870 U	14	35 U		3.5 U	18	3		4 U	27	5.1
Xylenes, Total		350 U				4.8 U				5.2 U		

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

The values for 2-chloropyridine and 2,6-dichloropyridine are derived using a unit risk value of 6.2E-06 (Arch, January 2005) and commercial/industrial parameters (8 hours per day, 250 days per year, 25 years).

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.

Prepared by / Date: KJC 04/09/08
Checked by / Date: JHP 04/16/08

Table 2
Pathway Completeness and Risk Analysis
Office

		Air Samples				Soil Gas Samples				Outdoor Air			
		IA-001 4/6/05	IA-001 3/2/06	IA-001 3/14/07	IA-001 3/4/08	SG-188 (IA-001) 4/6/05	SG-188 (IA-001) 3/2/06	SG-188 (IA-001) 3/14/07	SG-188 (IA-001) 3/4/08	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08
2,6-Dichloropyridine	ug/m3		1.1	4	3.1		0.43 U	10 U	2.2 U		0.46 U	1.2 U	2
2-Chloropyridine	ug/m3		24	24	4.7		13	34	4.9		2.3 U	2.5	4.7
1,1,1-Trichloroethane	ug/m3		1.1 U	0.68 U	0.25 U		1.1 U	5.4 U	0.49 U		1.1 U	0.68 U	0.25 U
1,1,2,2-Tetrachloroethane	ug/m3		1.4 U	1.8 U	0.31 U		1.4 U	14 U	0.62 U		1.4 U	1.8 U	0.31 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3		1.5 U	2 U	0.54		1.5 U	16 U	0.69 U		1.5 U	2 U	0.66
1,1,2-Trichloroethane	ug/m3		1.1 U	1.3 U	0.25 U		1.1 U	10 U	0.49 U		1.1 U	1.3 U	0.25 U
1,1-Dichloroethane	ug/m3		0.81 U	1 U	0.18 U		0.81 U	8 U	0.36 U		0.81 U	1 U	0.18 U
1,1-Dichloroethene	ug/m3		0.79 U	1 U	0.18 U		0.79 U	8 U	0.36 U		0.79 U	1 U	0.18 U
1,2,4-Trichlorobenzene	ug/m3		3.7 UJ	1.8 U	0.67 U		3.7 UJ	14 U	1.4 U		3.7 U	1.8 U	0.67 U
1,2,4-Trimethylbenzene	ug/m3		0.98 U	2.9	0.68		0.98 U	10 U	4.4		1.5	1.3 U	0.58
1,2-Dibromoethane	ug/m3		1.5 U	2 U	0.35 U		1.5 U	16 U	0.69 U		1.5 U	2 U	0.35 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3		1.4 U	1.8 U	0.32 U		1.4 U	14 U	0.63 U		1.4 U	1.8 U	0.32 U
1,2-Dichlorobenzene	ug/m3		1.2 U	1.5 U	0.27 U		1.2 U	12 U	0.54 U		1.2 U	1.5 U	0.27 U
1,2-Dichloroethane	ug/m3	0.16 U	0.81 U	1 U	0.18 U	0.81 U	0.81 U	8 U	0.36 U	0.16 U	0.81 U	1 U	0.18 U
1,2-Dichloroethene (total)	ug/m3	0.16 U	0.79 U			0.79 U	0.79 U			0.16 U	0.79 U		
1,2-Dichloropropane	ug/m3		0.92 U	1.3 U	0.21 U		0.92 U	10 U	0.42 U		0.92 U	1.3 U	0.21 U
1,3,5-Trimethylbenzene	ug/m3		0.98 U	1.3 U	0.23 U		0.98 U	10 U	0.86		0.98 U	1.3 U	0.23 U
1,3-Dichlorobenzene	ug/m3		1.2 U	1.5 U	0.27 U		1.2 U	12 U	0.54 U		1.2 U	1.5 U	0.27 U
1,4-Dichlorobenzene	ug/m3		1.2 U	1.5 U	0.27 U		1.2 U	12 U	0.54 U		1.2 U	1.5 U	0.27 U
1,4-Dioxane	ug/m3		R				R				18 U		
2-Butanone	ug/m3		1.5 U	4.3	1.6		1.5 U	6 U	11		1.5 U	2.4	4.9
2-Chlorotoluene	ug/m3		1 U				1 U				1 U		
2-Hexanone	ug/m3		2 U	1 U	0.18 U		2 U	8 U	0.36 U		2 U	1 U	0.81
2-Propanol	ug/m3		12 U	220	9.7		12 U	180000	4.8		12 U	3.8	2.4
4-Ethyltoluene	ug/m3		0.98 U	1.3 U	0.23 U		0.98 UJ	10 U	1.7		1.3	1.3 U	0.27
4-Methyl-2-pentanone	ug/m3		2 U	2.5	0.18 U		2 U	8 U	0.36 U		2 U	1.6	0.32
Acetone	ug/m3		12 U	33	15		12 UJ	4 U	22		12 U	14	66
Allyl chloride	ug/m3		1.6 U				1.6 U				1.6 U		
Benzene	ug/m3	1.9	0.64 U	0.75 U	0.92	1.5	0.64 U	6 U	0.74	1.7	2.4	1.1	1.7
Benzyl chloride	ug/m3			1.3 U	0.24 U			10 U	0.47 U			1.3 U	0.24 U
Bromodichloromethane	ug/m3	0.27 U	1.3 U	1.8 U	0.3 U	1.3 U	1.3 U	14 U	0.6 U	0.27 U	1.3 U	1.8 U	0.3 U
Bromoform	ug/m3	0.41 U	2.1 UJ		0.46 U	2.1 U	2.1 UJ		0.92 U	0.41 U	2.1 U		0.46 U
Bromomethane	ug/m3		0.78 U	1 U	0.18 U		0.78 U	8 U	0.35 U		0.78 U	1 U	0.18 U
Butadiene, 1,3-	ug/m3		1.1 U	0.5 U	0.1 U		1.1 U	4 U	0.2 U		1.1 U	0.5 U	0.1 U
Carbon Disulfide	ug/m3	1.6 U	1.6 U	0.75 U	0.21	5.6 J	1.6 U	6 U	0.29 U	1.6 U	1.6 U	0.75 U	0.15 U
Carbon Tetrachloride	ug/m3	0.63 J	1.3 U	0.78 U	0.41	1.3 U	1.3 UJ	6.2 U	0.56 U	0.57	1.3 U	0.78 U	0.46
Chlorobenzene	ug/m3	0.92 U	0.92 U	1.3 U	0.21 U	0.92 U	0.92 U	10 U	0.42 U	0.92 U	0.92 U	1.3 U	0.21 U
Chlorodibromomethane	ug/m3	0.34 U	1.7 U	2.3 U	0.39 U	1.7 U	1.7 U	18 U	0.78 U	0.34 U	1.7 U	2.3 U	0.39 U
Chloroethane	ug/m3		0.53 U	1.3 U	0.12 U		0.53 U	10 U	0.24 U		0.53 U	1.3 U	0.12 U
Chloroform	ug/m3	0.2 U	0.98 U	1.3 U	0.38	1.4	0.98 U	10 U	1	0.2 U	0.98 U	2.1	6.6
Chloromethane	ug/m3	1.4	1 U	0.5 U	0.76	1 U	1 U	4 U	0.29	1 U	1.4	0.5 U	0.89
Cis-1,2-Dichloroethene	ug/m3		0.79 U	1 U	0.18 U		0.79 U	8 U	0.36 U		0.79 U	1 U	0.18 U
cis-1,3-Dichloropropene	ug/m3		0.91 U	1.3 U	0.2 U		0.91 U	10 U	0.4 U		0.91 U	1.3 U	0.2 U
Cyclohexane	ug/m3		0.69 U	0.75 U	0.77		0.69 U	6 U	0.31 U		0.69 U	0.75 U	1.9

Table 2
Pathway Completeness and Risk Analysis
Office

		Air Samples				Soil Gas Samples				Outdoor Air			
		IA-001 4/6/05	IA-001 3/2/06	IA-001 3/14/07	IA-001 3/4/08	SG-188 (IA-001) 4/6/05	SG-188 (IA-001) 3/2/06	SG-188 (IA-001) 3/14/07	SG-188 (IA-001) 3/4/08	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08
Dichlorodifluoromethane	ug/m3		2.6 J	1.3 U	3		2.5 UJ	10 U	3.1		3.4	1.3 U	2.6
Ethylbenzene	ug/m3	1.4 J	0.87 U	2.7	81	3.3 J	0.87 U	8 U	13	0.61	1.1 U	2.4	5.3
Ethanol	ug/m3			410	0.17 U			8 U	0.33 U			33	0.46
Ethyl acetate	ug/m3			1.8 U	0.4			14 U	1.1			1.8 U	0.68
Heptane	ug/m3		0.82 U	1.3	0.43		0.82 U	8 U	0.36 U		0.86	1 U	0.57
Hexachlorobutadiene	ug/m3		2.1 UJ	2.8 U	0.48 U		2.1 UJ	22 U	0.96 U		2.1 U	2.8 U	0.48 U
Hexane	ug/m3		1.8 U	1 U	3.6		1.8 U	8 U	0.73		2.4	1 U	3.1
Isooctane	ug/m3		0.93 U				0.93 UJ				1.9		
Methyl Tertbutyl Ether	ug/m3		1.8 U	1 U	0.17 U		1.8 U	8 U	0.33 U		1.8 U	1 U	0.17 U
Methylene Chloride	ug/m3	5.6 J	1.7 U	1.4	5.3	1.7 U	1.7 U	10	0.31 U	5.6 J	1.7 U	3.2	0.16 U
o-Xylene	ug/m3		0.87 U	2.8	0.43		0.87 U	8 U	0.82		1.4 U	2.3	0.69
Propylene	ug/m3			0.5 U	0.31 U			4 U	0.62 U			0.5 U	0.31 U
Styrene	ug/m3		0.85 U	1.2	0.21		0.85 U	8 U	0.38 U		0.85 U	1 U	0.19 U
t-Butyl alcohol	ug/m3		15 U				15 U				15 U		
Tetrachloroethene	ug/m3	0.52	1.4 U	0.85 U	0.31 U	1.4 U	1.4 U	6.8 U	0.62 U	0.36	1.4 U	0.85 U	1
Tetrahydrofuran	ug/m3		15 U	1.5 U	0.14 U		15 U	12 U	0.27 U		15 U	1.5 U	0.14 U
Toluene	ug/m3	11 J	0.94 U	22	3.6	45 J	1.5 U	8 U	7.7	4.5 J	6.4 U	17	6.2
trans-1,2-Dichloroethene	ug/m3		0.79 U	1 U	0.18 U		0.79 U	8 U	0.36 U		0.79 U	1 U	0.18 U
trans-1,3-Dichloropropene	ug/m3		0.91 U	1.3 U	0.2 U		0.91 U	10 U	0.4 U		0.91 U	1.3 U	0.2 U
Trichloroethene	ug/m3	0.41	1.1 U	0.68 U	0.25 U	1.1 U	7 J	5.4 U	0.49 U	0.21 U	1.1 U	0.68 U	0.25 U
Trichlorofluoromethane	ug/m3		3.9	11	7.3		3.8 J	12 U	8.6		1.7	1.5	1.1
Vinyl acetate	ug/m3			1 U	0.17 U			8 U	0.33 U			1 U	0.17 U
Vinyl bromide	ug/m3		0.87 U				0.87 U				0.87 U		
Vinyl Chloride	ug/m3	0.1 U	0.51 U	0.75 U	0.12 U	0.51 U	0.51 U	6 U	0.24 U	0.1 U	0.51 U	0.75 U	0.12 U
Xylene, m/p	ug/m3		2.2 U	8.9	1.2		2.2 U	8 U	4		3.7 U	7.7	2.3
Xylenes, Total	ug/m3		0.87 U				0.87 U				5.2 U		

Notes:
Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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
Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.
[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures.
[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").
Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds
N - No; values that are bolded represent new findings as of the most recent sampling round
-- Not applicable

Table 2
Pathway Completeness and Risk Analysis
Office

	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 > Highest of Background, Air Guideline, and Risk-Based Value?	Used in Manufacturing?
2,6-Dichloropyridine			Y	Y	--	N	N		
2-Chloropyridine			Y	Y	--	Y	Y	Y	Y
1,1,1-Trichloroethane	<0.25 - 1.4		N			N	N		
1,1,2,2-Tetrachloroethane	<0.25		N			N	N		
1,1,2-Trichloro-1,2,2-Trifluoroethane			Y	N	--	N	N		
1,1,2-Trichloroethane	<0.25		N			N	N		
1,1-Dichloroethane	<0.25		N			N	N		
1,1-Dichloroethene	<0.25		N			N	N		
1,2,4-Trichlorobenzene			N			N	N		
1,2,4-Trimethylbenzene	0.78 - 4.4		Y	Y	N	**Y**	**Y**	N	
1,2-Dibromoethane	<0.25		N			N	N		
1,2-Dichloro-1,1,2,2-tetrafluoroethane			N			N	N		
1,2-Dichlorobenzene	<0.25		N			N	N		
1,2-Dichloroethane	<0.25		N			N	N		
1,2-Dichloroethene (total)			N			N	N		
1,2-Dichloropropane	<0.25		N			N	N		
1,3,5-Trimethylbenzene	<0.25 - 1.7		N			**Y**	N		
1,3-Dichlorobenzene	<0.25		N			N	N		
1,4-Dichlorobenzene			N			N	N		
1,4-Dioxane			N			N	N		
2-Butanone			Y	N	--	**Y**	**Y**	N	
2-Chlorotoluene			N			N	N		
2-Hexanone			N			N	N		
2-Propanol			Y	Y	--	Y	Y	Y	N
4-Ethyltoluene			N			**Y**	N		
4-Methyl-2-pentanone			Y	Y	--	N	N		
Acetone	10 - 46		Y	N	N	**Y**	**Y**	N	
Allyl chloride			N			N	N		
Benzene	1.2 - 5.7		Y	N	N	Y	Y	N	
Benzyl chloride			**N**			N	N		
Bromodichloromethane			N			N	N		
Bromoform			N			N	N		
Bromomethane	<0.25		N			N	N		
Butadiene, 1,3-			N			N	N		
Carbon Disulfide			**Y**	Y	--	*Y*	N		
Carbon Tetrachloride	<0.25 - 0.68		Y	Y	N	N	N		
Chlorobenzene	<0.25		N			N	N		
Chlorodibromomethane			N			N	N		
Chloroethane			N			N	N		
Chloroform	<0.25 - 0.54		**Y**	N	N	Y	**Y**	N	
Chloromethane	<0.25 - 2.0		Y	N	N	**Y**	**Y**	N	
Cis-1,2-Dichloroethene	<0.25		**N**			N	N		
cis-1,3-Dichloropropene			N			N	N		
Cyclohexane			Y	N	--	N	N		

Table 2
Pathway Completeness and Risk Analysis
Office

	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 > Highest of Background, Air Guideline, and Risk-Based Value?	Used in Manufacturing?
Dichlorodifluoromethane			Y	N	--	**Y**	**Y**	N	
Ethylbenzene	0.43 - 2.8		Y	Y	**Y**	Y	Y	Y	N
Ethanol			Y	Y	--	N	N		
Ethyl acetate			**Y**	N	--	**Y**	**Y**	N	
Heptane			Y	Y	--	N	N		
Hexachlorobutadiene			N			N	N		
Hexane	0.63 - 6.5		**Y**	N	N	Y	**Y**	N	
Isooctane			N			N	N		
Methyl Tertbutyl Ether	<0.25 - 6.7		N			N	N		
Methylene Chloride	0.38 - 6.3	60	Y	Y	N	Y	N	N	
o-Xylene	0.39 - 3.1		Y	N	N	Y	**Y**	N	
Propylene			N			N	N		
Styrene	<0.25 - 0.68		Y	Y	**N**	N	N		
t-Butyl alcohol			N			N	N		
Tetrachloroethene	<0.25 - 1.2	100	Y	N	N	N	N		
Tetrahydrofuran			N			N	N		
Toluene	4.2 - 25		Y	Y	N	Y	Y	N	
trans-1,2-Dichloroethene			N			N	N		
trans-1,3-Dichloropropene			N			N	N		
Trichloroethene	<0.25	5	Y	Y	N	Y	N		
Trichlorofluoromethane			Y	Y	--	Y	Y	N	
Vinyl acetate			N			N	N		
Vinyl bromide			N			N	N		
Vinyl Chloride	<0.25		N			N	N		
Xylene, m/p			Y	N	--	Y	**Y**	N	
Xylenes, Total			N			N	N		
						Excess Lifetime Cancer Risk [a]		9E-06 [b]	NC [c]
						Hazard Index [a]		0.4 [b]	0.005 [c]

Notes:
Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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
Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.
[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures.
[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").
Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds
N - No; values that are bolded represent new findings as of the most recent sampling round
-- Not applicable

Prepared by / Date: KJC 04/09/08
Checked by / Date: JHP 04/16/08

Table 3
Pathway Completeness and Risk Analysis
Warehouse Area

		Air Samples								Soil Gas Samples			
		IA-005 4/6/05	IA-005 3/2/06	IA-005 3/14/07	IA-005 3/4/08	IA-006 4/6/05	IA-006 3/2/06	IA-006 3/14/07	IA-006 3/4/08	SG-192 (IA-005) 4/6/05	SG-192 (IA-005) 3/2/06	SG-192 (IA-005) 3/14/07	SG-192 (IA-005) 3/4/08
2,6-Dichloropyridine	ug/m3		0.43 U	50	9.7		0.48	960	570		1.9	31	2.2 U
2-Chloropyridine	ug/m3		4.5	380	24		10	1200	1800		40	420	9.4
1,1,1-Trichloroethane	ug/m3		1.1 U	0.11 U	0.25 U		2.7 U	0.68 U	0.25 U		1.1 U	0.54 U	0.49 U
1,1,2,2-Tetrachloroethane	ug/m3		1.4 U	0.28 U	0.31 U		3.4 U	1.8 U	0.31 U		1.4 U	1.4 U	0.62 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3		1.5 U	0.55	0.59		3.8 U	2 U	0.57		1.5 U	1.6 U	0.69 U
1,1,2-Trichloroethane	ug/m3		1.1 U	0.2 U	0.25 U		2.7 U	1.3 U	0.25 U		1.1 U	1 U	0.49 U
1,1-Dichloroethane	ug/m3		0.81 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.81 U	0.8 U	0.36 U
1,1-Dichloroethene	ug/m3		0.79 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.79 U	0.8 U	0.36 U
1,2,4-Trichlorobenzene	ug/m3		3.7 UJ	0.28 U	0.67 U		9.6 U	1.8 U	0.67 U		3.7 UJ	1.4 U	1.4 U
1,2,4-Trimethylbenzene	ug/m3		69	29	40		15	670	300		9.8	18	0.97
1,2-Dibromoethane	ug/m3		1.5 U	0.32 U	0.35 U		3.8 U	2 U	0.35 U		1.5 U	1.6 U	0.69 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3		1.4 U	0.28 U	0.32 U		3.5 U	1.8 U	0.32 U		1.4 U	1.4 U	0.63 U
1,2-Dichlorobenzene	ug/m3		1.2 U	0.24 U	0.27 U		3 U	1.5 U	0.27 U		1.2 U	1.2 U	0.54 U
1,2-Dichloroethane	ug/m3	0.081 U	0.81 U	0.16 U	0.18 U	0.25 U	2 U	1 U	0.18 U	0.81 U	0.81 U	0.8 U	0.36 U
1,2-Dichloroethene (total)	ug/m3	0.079 U	0.79 U			0.25 U	2 U			0.79 U	0.79 U		
1,2-Dichloropropane	ug/m3		0.92 U	0.2 U	0.21 U		2.3 U	1.3 U	0.21 U		0.92 U	1 U	0.42 U
1,3,5-Trimethylbenzene	ug/m3		25	10	13		5.9	260	150		3.5	6.2	0.45 U
1,3-Dichlorobenzene	ug/m3		1.2 U	0.24 U	0.27 U		3 U	1.5 U	0.27 U		1.2 U	1.2 U	0.54 U
1,4-Dichlorobenzene	ug/m3		1.2 U	0.24 U	0.27 U		3 U	1.5 U	0.27 U		1.2 U	1.2 U	0.54 U
1,4-Dioxane	ug/m3		R				47 U				R		
2-Butanone	ug/m3		1.5 U	4.2	5.6		3.8 U	52	10		1.6 U	2.8	2.1
2-Chlorotoluene	ug/m3		1 U				2.6 U				1 U		
2-Hexanone	ug/m3		2 U	0.29	0.39		5.3 U	1 U	0.18 U		2 U	0.8 U	0.36 U
2-Propanol	ug/m3		79	480	41		100	310	37		12 U	15000	2
4-Ethyltoluene	ug/m3		59	12	11		17	290	130		8.8	7.2	0.45 U
4-Methyl-2-pentanone	ug/m3		2 U	1.5	0.18 U		5.3 U	1 U	0.66		2 U	0.8 U	0.36 U
Acetone	ug/m3		86	33	40		74	360	120		12 U	94	24
Allyl chloride	ug/m3		1.6 U				4.1 U				1.6 U		
Benzene	ug/m3	1.6	0.99	1.1	1.2	1.5	1.6 U	1.6	1.7	2.4	0.64 U	0.64	0.52
Benzyl chloride	ug/m3			0.2 U	0.24 U			1.3 U	0.24 U			1 U	0.47 U
Bromodichloromethane	ug/m3	0.13 U	1.3 U	0.28 U	0.3 U	0.42 U	3.4 U	1.8 U	0.3 U	1.3 U	1.3 U	1.4 U	0.6 U
Bromoform	ug/m3	0.21 U	2.1 UJ		0.46 U	0.64 U	5.2 U		0.46 U	2.1 U	2.1 UJ		0.92 U
Bromomethane	ug/m3		0.78 U	0.16 U	0.18 U		1.9 U	1 U	0.18 U		0.78 U	0.8 U	0.35 U
Butadiene, 1,3-	ug/m3		1.1 U	0.08 U	0.1 U		2.9 U	0.5 U	0.1 U		1.1 U	0.4 U	0.2 U
Carbon Disulfide	ug/m3	1.6 U	1.6 U	0.12 U	0.15 U	1.6 U	4 U	0.75 U	0.72	4.4 J	1.6 U	0.6 U	0.29 U
Carbon Tetrachloride	ug/m3	0.69	1.3 UJ	0.53	0.54	0.82	3.1 U	0.78 U	1.5	1.8	1.3 J	0.62 U	0.88
Chlorobenzene	ug/m3	0.92 U	0.92 U	0.2 U	0.21 U	0.92 U	2.3 U	1.3 U	0.21 U	0.92 U	0.92 U	1 U	0.42 U
Chlorodibromomethane	ug/m3	0.17 U	1.7 U	0.36 U	0.39 U	0.53 U	4.3 U	2.3 U	0.39 U	1.7 U	1.7 U	1.8 U	0.78 U
Chloroethane	ug/m3		0.53 U	0.2 U	0.12 U		1.3 U	1.3 U	0.12 U		0.53 U	1 U	0.24 U
Chloroform	ug/m3	0.41	2.5	0.49	0.95	0.98	6.3	3.3	87	0.98 U	0.98 U	1.3	1.5
Chloromethane	ug/m3	1.5	1.3	0.97	0.85	1.9	2.7 U	0.5 U	0.09 U	2.9	1 U	0.4 U	0.18 U
Cis-1,2-Dichloroethene	ug/m3		0.79 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.79 U	0.8 U	0.36 U
cis-1,3-Dichloropropene	ug/m3		0.91 U	0.2 U	0.2 U		2.3 U	1.3 U	0.2 U		0.91 U	1 U	0.4 U
Cyclohexane	ug/m3		0.69 U	0.12 U	0.58		1.7 U	0.95	2.8		0.69 U	0.6 U	0.31 U

Table 3
Pathway Completeness and Risk Analysis
Warehouse Area

		Air Samples								Soil Gas Samples			
		IA-005 4/6/05	IA-005 3/2/06	IA-005 3/14/07	IA-005 3/4/08	IA-006 4/6/05	IA-006 3/2/06	IA-006 3/14/07	IA-006 3/4/08	SG-192 (IA-005) 4/6/05	SG-192 (IA-005) 3/2/06	SG-192 (IA-005) 3/14/07	SG-192 (IA-005) 3/4/08
Dichlorodifluoromethane	ug/m3		4.9 J	0.3	2.5		6.4 U	1.3 U	2.4		5.4 J	1 U	2.5
Ethylbenzene	ug/m3	2.6 J	1.7 U	2.5	90	6.1 J	2.9 U	6.3	180	6.1 J	1.1 U	5.1	6.3
Ethanol	ug/m3			38	22			340	0.17 U			0.8 U	0.33 U
Ethyl acetate	ug/m3			1.8 U	1.7			1.8 U	2.4			1.4 U	0.83
Heptane	ug/m3		3.6	4.6	2.4		3.2	14	1.6		0.82 U	5.1	0.36 U
Hexachlorobutadiene	ug/m3		2.1 UJ	0.44 U	0.48 U		5.3 U	2.8 U	0.48 U		2.1 UJ	2.2 U	0.96 U
Hexane	ug/m3		1.8 U	2.1	0.17 U		6.3	3.1	240		1.8 U	1.9	1.2
Isooctane	ug/m3		0.93 U				2.3 U				0.93 U		
Methyl Tertbutyl Ether	ug/m3		1.8 U	0.16 U	0.17 U		4.7 U	1 U	0.17 U		1.8 U	0.8 U	0.33 U
Methylene Chloride	ug/m3	5.6 J	1.7 U	1.2	0.85	25	280	13	110	1.7 U	1.7 U	1.1	0.88
o-Xylene	ug/m3		1.3 U	2.9	1.7		2.2 U	6.3	7.4		1 U	5.8	0.55
Propylene	ug/m3			0.08 U	0.31 U			0.5 U	0.31 U			0.4 U	0.62 U
Styrene	ug/m3		0.85 U	0.43	0.25		2.1 U	1 U	1.3		0.85 U	0.8 U	0.38 U
t-Butyl alcohol	ug/m3		15 U				39 U				15 U		
Tetrachloroethene	ug/m3	0.6	1.4 U	0.43	0.31 U	0.5	3.4 U	0.85 U	0.6	6.5	3.3	1.8	7.1
Tetrahydrofuran	ug/m3		15 U	0.72	0.34		38 U	1.5 U	0.89		15 U	1.2 U	0.27 U
Toluene	ug/m3	6 J	7.2 U	14	6.2	6.4 J	8.3 U	22	5.8	68 J	3.8 U	8.2	6.4
trans-1,2-Dichloroethene	ug/m3		0.79 U	0.16 U	0.18 U		2 U	1 U	0.18 U		0.79 U	0.8 U	0.36 U
trans-1,3-Dichloropropene	ug/m3		0.91 U	0.2 U	0.2 U		2.3 U	1.3 U	0.2 U		0.91 U	1 U	0.4 U
Trichloroethene	ug/m3	0.33	1.1 U	0.11 U	0.25 U	0.49	2.7 U	0.68 U	0.25 U	1.1 U	1.1 U	0.54 U	0.49 U
Trichlorofluoromethane	ug/m3		2.5	1.9	2		2.8 U	2.7	1.9		2.1	2	1.7
Vinyl acetate	ug/m3			1.4	0.17 U			1 U	0.17 U			0.8 U	0.33 U
Vinyl bromide	ug/m3		0.87 U				2.2 U				0.87 U		
Vinyl Chloride	ug/m3	0.051 U	0.51 U	0.12 U	0.12 U	0.16 U	1.3 U	0.75 U	0.12 U	0.51 U	0.51 U	0.6 U	0.24 U
Xylene, m/p	ug/m3		4.8 U	8.7	4.3		5.6 U	15	6.7		3.5 U	18	3
Xylenes, Total	ug/m3		6.1 U				2.2 U				4.8 U		

Notes:
Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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
Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.
[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures.
[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").
Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds
N - No; values that are bolded represent new findings as of the most recent sampling round
-- Not applicable

Table 3
Pathway Completeness and Risk Analysis
Warehouse Area

	Soil Gas Samples (cont)				Outdoor Air							
	SG-193 (IA-006) 4/6/05	SG-193 (IA-006) 3/2/06	SG-193 (IA-006) 3/14/07	SG-193 (IA-006) 3/4/08	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Average Indoor Air > Outdoor Air?
2,6-Dichloropyridine		0.72	9.1	98 U		0.46 U	1.2 U	2			Y	Y
2-Chloropyridine		13	1000	5100		2.3 U	2.5	4.7			Y	Y
1,1,1-Trichloroethane		1.1 U	0.68 U	0.49 U		1.1 U	0.68 U	0.25 U	<0.25 - 1.4		N	
1,1,2,2-Tetrachloroethane		1.4 U	1.8 U	0.62 U		1.4 U	1.8 U	0.31 U	<0.25		N	
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.5 U	2 U	0.69 U		1.5 U	2 U	0.66			Y	Y
1,1,2-Trichloroethane		1.1 U	1.3 U	0.49 U		1.1 U	1.3 U	0.25 U	<0.25		N	
1,1-Dichloroethane		0.81 U	1 U	0.36 U		0.81 U	1 U	0.18 U	<0.25		N	
1,1-Dichloroethene		0.79 U	1 U	0.36 U		0.79 U	1 U	0.18 U	<0.25		N	
1,2,4-Trichlorobenzene		3.7 U	1.8 U	1.4 U		3.7 U	1.8 U	0.67 U			N	
1,2,4-Trimethylbenzene		4.1	40	8.5		1.5	1.3 U	0.58	0.78 - 4.4		Y	Y
1,2-Dibromoethane		1.5 U	2 U	0.69 U		1.5 U	2 U	0.35 U	<0.25		N	
1,2-Dichloro-1,1,2,2-tetrafluoroethane		1.4 U	1.8 U	0.63 U		1.4 U	1.8 U	0.32 U			N	
1,2-Dichlorobenzene		1.2 U	1.5 U	0.54 U		1.2 U	1.5 U	0.27 U	<0.25		N	
1,2-Dichloroethane	0.81 U	0.81 U	1 U	0.36 U	0.16 U	0.81 U	1 U	0.18 U	<0.25		N	
1,2-Dichloroethene (total)	0.79 U	0.79 U			0.16 U	0.79 U					N	
1,2-Dichloropropane		0.92 U	1.3 U	0.42 U		0.92 U	1.3 U	0.21 U	<0.25		N	
1,3,5-Trimethylbenzene		1.3	19	6.2		0.98 U	1.3 U	0.23 U	<0.25 - 1.7		Y	Y
1,3-Dichlorobenzene		1.2 U	1.5 U	0.54 U		1.2 U	1.5 U	0.27 U	<0.25		N	
1,4-Dichlorobenzene		1.2 U	1.5 U	0.54 U		1.2 U	1.5 U	0.27 U			N	
1,4-Dioxane		18 U				18 U					N	
2-Butanone		1.8 U	5.8	6.6		1.5 U	2.4	4.9			Y	Y
2-Chlorotoluene		1 U				1 U					N	
2-Hexanone		2 U	1 U	0.36 U		2 U	1 U	0.81			Y	Y
2-Propanol		12 U	61000	38		12 U	3.8	2.4			Y	Y
4-Ethyltoluene		4.6	26	6.4		1.3	1.3 U	0.27			Y	Y
4-Methyl-2-pentanone		2 U	1 U	2.9		2 U	1.6	0.32			Y	Y
Acetone		12 U	170	65		12 U	14	66	10 - 46		Y	Y
Allyl chloride		1.6 U				1.6 U					N	
Benzene	0.73	0.64 U	0.75 U	1.1	1.7	2.4	1.1	1.7	1.2 - 5.7		Y	N
Benzyl chloride			1.3 U	0.47 U			1.3 U	0.24 U			N	
Bromodichloromethane	1.3 U	1.3 U	1.8 U	0.6 U	0.27 U	1.3 U	1.8 U	0.3 U			N	
Bromoform	2.1 U	2.1 U		0.92 U	0.41 U	2.1 U		0.46 U			N	
Bromomethane		0.78 U	1 U	0.35 U		0.78 U	1 U	0.18 U	<0.25		N	
Butadiene, 1,3-		1.1 U	0.5 U	0.2 U		1.1 U	0.5 U	0.1 U			N	
Carbon Disulfide	3.7 J	1.6 U	0.75 U	0.29 U	1.6 U	1.6 U	0.75 U	0.15 U			Y	Y
Carbon Tetrachloride	1.3 U	1.3 U	0.78 U	0.67	0.57	1.3 U	0.78 U	0.46	<0.25 - 0.68		Y	Y
Chlorobenzene	0.92 U	0.92 U	1.3 U	0.42 U	0.92 U	0.92 U	1.3 U	0.21 U	<0.25		N	
Chlorodibromomethane	1.7 U	1.7 U	2.3 U	0.78 U	0.34 U	1.7 U	2.3 U	0.39 U			N	
Chloroethane		3.2	1.3 U	0.24 U		0.53 U	1.3 U	0.12 U			N	
Chloroform	0.98 U	1	1.3 U	0.88	0.2 U	0.98 U	2.1	6.6	<0.25 - 0.54		Y	Y
Chloromethane	1 U	1 U	0.5 U	0.18 U	1 U	1.4	0.5 U	0.89	<0.25 - 2.0		Y	Y
Cis-1,2-Dichloroethene		0.79 U	1 U	0.36 U		0.79 U	1 U	0.18 U	<0.25		N	
cis-1,3-Dichloropropene		0.91 U	1.3 U	0.4 U		0.91 U	1.3 U	0.2 U			N	
Cyclohexane		0.69 U	3.9	0.31 U		0.69 U	0.75 U	1.9			Y	Y

Table 3
Pathway Completeness and Risk Analysis
Warehouse Area

	Soil Gas Samples (cont)				Outdoor Air							
	SG-193 (IA-006) 4/6/05	SG-193 (IA-006) 3/2/06	SG-193 (IA-006) 3/14/07	SG-193 (IA-006) 3/4/08	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Average Indoor Air > Outdoor Air?
Dichlorodifluoromethane		3	1.3 U	2.3		3.4	1.3 U	2.6			Y	Y
Ethylbenzene	6.9 J	1.5 U	6.5	56	0.61	1.1 U	2.4	5.3	0.43 - 2.8		Y	Y
Ethanol			1 U	7.7			33	0.46			Y	Y
Ethyl acetate			1.8 U	1.7			1.8 U	0.68			Y	Y
Heptane		0.82 U	9.7	0.6		0.86	1 U	0.57			Y	Y
Hexachlorobutadiene		2.1 U	2.8 U	0.96 U		2.1 U	2.8 U	0.48 U			N	
Hexane		1.8 U	1 U	0.33 U		2.4	1 U	3.1	0.63 - 6.5		Y	Y
Isooctane		0.93 U				1.9					N	
Methyl Tertbutyl Ether		1.8 U	1 U	0.33 U		1.8 U	1 U	0.17 U	<0.25 - 6.7		N	
Methylene Chloride	1.7 U	19	0.75 U	0.31 U	5.6 J	1.7 U	3.2	0.16 U	0.38 - 6.3	60	Y	Y
o-Xylene		1.3 U	8.3	1.4		1.4 U	2.3	0.69	0.39 - 3.1		Y	Y
Propylene			0.5 U	0.62 U			0.5 U	0.31 U			N	
Styrene		0.85 U	1 U	0.38 U		0.85 U	1 U	0.19 U	<0.25 - 0.68		Y	Y
t-Butyl alcohol		15 U				15 U					N	
Tetrachloroethene	1.4 U	1.4 U	0.85 U	0.62 U	0.36	1.4 U	0.85 U	1	<0.25 - 1.2	100	Y	Y
Tetrahydrofuran		15 U	1.5 U	0.27 U		15 U	1.5 U	0.14 U			Y	Y
Toluene	49 J	6 U	6.2	9.2	4.5 J	6.4 U	17	6.2	4.2 - 25		Y	Y
trans-1,2-Dichloroethene		0.79 U	1 U	0.36 U		0.79 U	1 U	0.18 U			N	
trans-1,3-Dichloropropene		0.91 U	1.3 U	0.4 U		0.91 U	1.3 U	0.2 U			N	
Trichloroethene	1.1 U	1.1 U	0.68 U	0.49 U	0.21 U	1.1 U	0.68 U	0.25 U	<0.25	5	Y	Y
Trichlorofluoromethane		1.7	1.7	1		1.7	1.5	1.1			Y	Y
Vinyl acetate			1 U	0.33 U			1 U	0.17 U			Y	Y
Vinyl bromide		0.87 U				0.87 U					N	
Vinyl Chloride	0.51 U	0.51 U	0.75 U	0.24 U	0.1 U	0.51 U	0.75 U	0.12 U	<0.25		N	
Xylene, m/p		4 U	27	5.1		3.7 U	7.7	2.3			Y	Y
Xylenes, Total		5.2 U				5.2 U					N	

Notes:
Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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
Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.
[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures.
[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").
Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds
N - No; values that are bolded represent new findings as of the most recent sampling round
-- Not applicable

Table 3
Pathway Completeness and Risk Analysis
Warehouse Area

	Average Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?	Pathway Potentially Complete & Indoor Air > Highest of Background, Air Guideline, and Risk-Based Value?	Used in Manufacturing?
2,6-Dichloropyridine	--	Y	N		
2-Chloropyridine	--	Y	Y	Y	Y
1,1,1-Trichloroethane		N	N		
1,1,2,2-Tetrachloroethane		N	N		
1,1,2-Trichloro-1,2,2-Trifluoroethane	--	N	N		
1,1,2-Trichloroethane		N	N		
1,1-Dichloroethane		N	N		
1,1-Dichloroethene		N	N		
1,2,4-Trichlorobenzene		N	N		
1,2,4-Trimethylbenzene	Y	Y	Y	Y	N
1,2-Dibromoethane		N	N		
1,2-Dichloro-1,1,2,2-tetrafluoroethane		N	N		
1,2-Dichlorobenzene		N	N		
1,2-Dichloroethane		N	N		
1,2-Dichloroethene (total)		N	N		
1,2-Dichloropropane		N	N		
1,3,5-Trimethylbenzene	Y	Y	Y	Y	N
1,3-Dichlorobenzene		N	N		
1,4-Dichlorobenzene		N	N		
1,4-Dioxane		N	N		
2-Butanone	--	Y	Y	N	
2-Chlorotoluene		N	N		
2-Hexanone	--	N	N		
2-Propanol	--	Y	Y	Y	N
4-Ethyltoluene	--	Y	Y	Y	N
4-Methyl-2-pentanone	--	Y	Y		
Acetone	Y	Y	Y	N	
Allyl chloride		N	N		
Benzene	N	Y	Y	N	
Benzyl chloride		N	N		
Bromodichloromethane		N	N		
Bromoform		N	N		
Bromomethane		N	N		
Butadiene, 1,3-		N	N		
Carbon Disulfide		Y	N		
Carbon Tetrachloride	Y	Y	Y	Y	N
Chlorobenzene		N	N		
Chlorodibromomethane		N	N		
Chloroethane		Y	N		
Chloroform	Y	Y	Y	Y	Y
Chloromethane	N	Y	N		
Cis-1,2-Dichloroethene		N	N		
cis-1,3-Dichloropropene		N	N		
Cyclohexane	--	Y	N		

Table 3
Pathway Completeness and Risk Analysis
Warehouse Area

	Average Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?	Pathway Potentially Complete & Indoor Air > Highest of Background, Air Guideline, and Risk-Based Value?	Used in Manufacturing?
Dichlorodifluoromethane	--	Y	Y	N	
Ethylbenzene	Y	Y	Y	Y	N
Ethanol	--	Y	Y		
Ethyl acetate	--	Y	Y	N	
Heptane	--	Y	Y	N	
Hexachlorobutadiene		N	N		
Hexane	Y	Y	Y	N	
Isooctane		N	N		
Methyl Tertbutyl Ether		N	N		
Methylene Chloride	N	Y	Y	**N**	
o-Xylene	Y	Y	Y	N	
Propylene		N	N		
Styrene	N	N	N		
t-Butyl alcohol		N	N		
Tetrachloroethene	N	Y	Y	N	
Tetrahydrofuran	--	N	N		
Toluene	N	Y	Y	N	
trans-1,2-Dichloroethene		N	N		
trans-1,3-Dichloropropene		N	N		
Trichloroethene	N	N	N		
Trichlorofluoromethane	--	Y	Y	N	
Vinyl acetate	--	N	N		
Vinyl bromide		N	N		
Vinyl Chloride		N	N		
Xylene, m/p	--	Y	Y	N	
Xylenes, Total		N	N		
Excess Lifetime Cancer Risk [a]				3E-04 [b]	1E-06 [c]
Hazard Index [a]				23 [b]	10 [c]

Notes:
Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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
Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.
[a] Risks are calculated in Attachment A and are based on full-time commercial/industrial worker exposures.
[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").
Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds
N - No; values that are bolded represent new findings as of the most recent sampling round
-- Not applicable

Prepared by / Date: KJC 04/0908
Checked by / Date: JHP 04/16/08

Table 4
Pathway Completeness and Risk Analysis
Production Area

		Air Samples											
		IA-002 4/6/05	IA-002 3/2/06	IA-002 3/14/07	IA-002 3/4/08	IA-003 4/6/05	IA-003 3/2/06	IA-003 3/14/07	IA-003 3/4/08	IA-004 4/6/05	IA-004 3/2/06	IA-004 3/14/07	IA-004 3/4/08
2,6-Dichloropyridine	ug/m3		22	100 U	95		97	100 U	330		12	22	20
2-Chloropyridine	ug/m3		1500	590	340		550	950	350		450	580	23
1,1,1-Trichloroethane	ug/m3		1.1 U	0.22 U	0.99 U		1.1 U	0.37	0.25 U		1.1 U	0.35	0.25 U
1,1,2,2-Tetrachloroethane	ug/m3		1.4 U	0.56 U	1.3 U		1.4 U	0.28 U	0.31 U		1.4 U	0.28 U	0.31 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3		1.5 U	0.64 U	1.4 U		1.5 U	0.55	0.58		1.5 U	0.58	0.6
1,1,2-Trichloroethane	ug/m3		1.1 U	0.4 U	0.99 U		1.1 U	0.2 U	0.25 U		1.1 U	0.2 U	0.25 U
1,1-Dichloroethane	ug/m3		0.81 U	0.32 U	0.73 U		0.81 U	0.16 U	0.18 U		0.81 U	0.16 U	0.18 U
1,1-Dichloroethene	ug/m3		0.79 U	0.32 U	0.72 U		0.79 U	0.24	0.18 U		0.79 U	0.16 U	0.18 U
1,2,4-Trichlorobenzene	ug/m3		3.7 UJ	0.56 U	1.4 U		3.7 UJ	0.28 U	0.67 U		3.7 UJ	0.28 U	0.67 U
1,2,4-Trimethylbenzene	ug/m3		74	0.4 U	4.5		16	2.7	2.2		44	4.3	4.1
1,2-Dibromoethane	ug/m3		1.5 U	0.64 U	1.4 U		1.5 U	0.32 U	0.35 U		1.5 U	0.32 U	0.35 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ug/m3		1.4 U	0.56 U	1.3 U		1.4 U	0.28 U	0.32 U		1.4 U	0.28 U	0.32 U
1,2-Dichlorobenzene	ug/m3		1.2 U	0.48 U	1.1 U		1.2 U	0.24 U	0.27 U		1.2 U	0.24 U	0.27 U
1,2-Dichloroethane	ug/m3	0.4 U	0.81 U	0.32 U	0.73 U	0.13 U	0.81 U	0.16 U	0.18 U	0.065	0.81 U	0.16 U	0.18 U
1,2-Dichloroethene (total)	ug/m3	0.4 U	0.79 U			0.13 U	0.79 U			0.04 U	0.79 U		
1,2-Dichloropropane	ug/m3		0.92 U	0.4 U	0.84 U		0.92 U	0.2 U	0.21 U		0.92 U	0.2 U	0.21 U
1,3,5-Trimethylbenzene	ug/m3		29	0.4 U	1.7		5.9	0.88	0.68		17	1.5	1.5
1,3-Dichlorobenzene	ug/m3		1.2 U	0.48 U	1.1 U		1.2 U	0.24 U	0.27 U		1.2 U	0.24 U	0.27 U
1,4-Dichlorobenzene	ug/m3		1.2 U	0.48 U	1.1 U		1.2 U	0.24 U	0.27 U		1.2 U	0.24 U	0.27 U
1,4-Dioxane	ug/m3		R				R				R		
2-Butanone	ug/m3		1.5 U	21	5.3		3.8 U	8	17		1.5 U	94	4.5
2-Chlorotoluene	ug/m3		1 U				1 U				1 U		
2-Hexanone	ug/m3		2 U	0.32 U	1.1		2 U	0.46	0.18		2 U	0.16 U	0.32
2-Propanol	ug/m3		12 U	16	18		12 U	25	3500		29	5900	25
4-Ethyltoluene	ug/m3		88	0.4 U	1.5		18	1	0.7		54	1.6	0.92
4-Methyl-2-pentanone	ug/m3		2 U	1.8	0.76		2 U	5.2	1.1		2 U	2.4	0.36
Acetone	ug/m3		12 U	64	25		33	16	22		36	35	78
Allyl chloride	ug/m3		1.6 U				1.6 U				1.6 U		
Benzene	ug/m3	0.73	0.64 U	0.87	3.2	1.1	0.93	1.3	1.3	1.5	1.1	1.3	1.1
Benzyl chloride	ug/m3			0.4 U	0.94 U			0.2 U	0.24 U			0.2 U	0.24 U
Bromodichloromethane	ug/m3	0.67 U	1.3 U	0.56 U	1.3 U	0.22 U	1.3 U	0.28 U	0.3 U	0.067 U	1.3 U	0.28 U	0.3 U
Bromoform	ug/m3	1 U	2.1 UJ		1.9 U	0.34 U	2.1 UJ		0.46 U	0.1 U	2.1 UJ		0.46 U
Bromomethane	ug/m3		0.78 U	0.32 U	0.7 U		0.78 U	0.16 U	0.18 U		0.78 U	0.16 U	0.18 U
Butadiene, 1,3-	ug/m3		1.1 U	0.16 U	0.4 U		1.1 U	0.08 U	0.1 U		1.1 U	0.08 U	0.1 U
Carbon Disulfide	ug/m3	1.6 U	1.6 U	0.4	0.57 U	1.6 U	1.6 U	0.27	0.94	1.6 U	1.6 U	0.16	0.15 U
Carbon Tetrachloride	ug/m3	0.69	1.3 UJ	1.2	1.3	4.3	5.2 J	4.8	2	0.69	1.3 UJ	0.55	0.5
Chlorobenzene	ug/m3	6	1.2	0.4 U	0.83 U	0.92 U	0.92 U	0.53	0.21 U	0.92 U	0.92 U	0.2 U	0.21 U
Chlorodibromomethane	ug/m3	0.85 U	1.7 U	0.72 U	1.6 U	0.28 U	1.7 U	0.36 U	0.39 U	0.085 U	1.7 U	0.36 U	0.39 U
Chloroethane	ug/m3		0.53 U	0.4 U	0.48 U		0.53 U	0.2 U	0.12 U		0.53 U	0.2 U	0.12 U
Chloroform	ug/m3	2.2	15	12	4.7	2.7	27	6.3	12	1.8	35	2.9	1.2
Chloromethane	ug/m3	1.6	1 U	3.9	1.4	1.6	1.5	1	0.95	1.2	1.3	1	0.96
Cis-1,2-Dichloroethene	ug/m3		0.79 U	0.32 U	0.72 U		0.79 U	0.16 U	0.18 U		0.79 U	0.16 U	0.18 U
cis-1,3-Dichloropropene	ug/m3		0.91 U	0.4 U	0.82 U		0.91 U	0.2 U	0.2 U		0.91 U	0.2 U	0.2 U
Cyclohexane	ug/m3		0.69 U	0.24 U	0.63 U		0.69 U	0.12 U	0.3		0.69 U	0.12 U	0.62
Dichlorodifluoromethane	ug/m3		2.5 UJ	2.7	2.9		4.9 J	2.2	2.5		4.9 J	2	2.5
Ethylbenzene	ug/m3	30	3.1 U	0.32 U	8.5	0.91 J	1 U	2.9	11	1.2 J	2.6 U	5.7	91

Table 4
Pathway Completeness and Risk Analysis
Production Area

		Air Samples											
		IA-002 4/6/05	IA-002 3/2/06	IA-002 3/14/07	IA-002 3/4/08	IA-003 4/6/05	IA-003 3/2/06	IA-003 3/14/07	IA-003 3/4/08	IA-004 4/6/05	IA-004 3/2/06	IA-004 3/14/07	IA-004 3/4/08
Ethanol	ug/m3			75	0.73			61	2.3			0.16 U	2.6
Ethyl acetate	ug/m3			0.56 U	2.2			0.28 U	0.85			0.28 U	0.94
Heptane	ug/m3		0.82 U	0.56	0.74 U		0.82 U	0.38	0.42		1.3	1	0.7
Hexachlorobutadiene	ug/m3		2.1 UJ	0.88 U	2 U		2.1 UJ	0.44 U	0.48 U		2.1 UJ	0.44 U	0.48 U
Hexane	ug/m3		1.8 U	1	1.7		1.8 U	1	2		1.8 U	1.4	2
Isooctane	ug/m3		0.93 U				0.93 U				0.93 U		
Methyl Tertbutyl Ether	ug/m3		1.8 U	0.32 U	0.65 U		1.8 U	0.16 U	0.17 U		1.8 U	0.16 U	0.17 U
Methylene Chloride	ug/m3	11 J	1.7 U	5.4	2.3	5.9 J	1.7	2.1	10	6.3 J	2.2	2	6.3
o-Xylene	ug/m3		0.87 U	0.32 U	3		0.87 U	3.8	0.74		1.4 U	6	1.2
Propylene	ug/m3			0.16 U	0.31 U			0.08 U	0.31 U			0.08 U	0.31 U
Styrene	ug/m3		0.85 U	0.32 U	0.97		0.85 U	0.29	0.26		0.85 U	0.49	0.25
t-Butyl alcohol	ug/m3		15 U				15 U				15 U		
Tetrachloroethene	ug/m3	2.3	2.3	0.28 U	1.3 U	0.95	1.5	1.1	0.56	0.53	1.4 U	0.79	0.73
Tetrahydrofuran	ug/m3		15 U	28	0.63		15 U	12	9.8		15 U	100	0.41
Toluene	ug/m3	4.1 J	1.5 U	0.32 U	6.6	4.9 J	2.5 U	13	4.8	3.3 J	3.3 U	21	4
trans-1,2-Dichloroethene	ug/m3		0.79 U	0.32 U	0.72 U		0.79 U	0.16 U	0.18 U		0.79 U	0.16 U	0.18 U
trans-1,3-Dichloropropene	ug/m3		0.91 U	0.4 U	0.82 U		0.91 U	0.2 U	0.2 U		0.91 U	0.2 U	0.2 U
Trichloroethene	ug/m3	0.54 U	1.1 U	0.22 U	0.97 U	**0.7**	1.1 U	0.11 U	**0.56**	**0.32**	1.1 U	**0.3**	0.25 U
Trichlorofluoromethane	ug/m3		1.1 U	1.8	1.5		2	1.6	1.5		2.1	1.6	1.5
Vinyl acetate	ug/m3			0.32 U	0.64 U			0.16 U	0.17 U			1.8	0.17 U
Vinyl bromide	ug/m3		0.87 U				0.87 U				0.87 U		
Vinyl Chloride	ug/m3	0.26 U	0.51 U	0.24 U	0.47 U	0.084 U	0.51 U	0.12 U	0.12 U	0.026 U	0.51 U	0.12 U	0.12 U
Xylene, m/p	ug/m3		2.5 U	0.32 U	7.8		2.2 U	12	2.4		4.8 U	19	3.6
Xylenes, Total	ug/m3		2.6 U				0.87 U				6.5 U		

Notes:

Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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

Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.

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

[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").

Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds

N - No; values that are bolded represent new findings as of the most recent sampling round

-- Not applicable

Table 4
Pathway Completeness and Risk Analysis
Production Area

	Soil Gas Samples											
	SG-189 (IA-002) 4/6/05	SG-189 (IA-002) 3/2/06	SG-189 (IA-002) 3/14/07	SG-189 (IA-002) 3/4/08	SG-190 (IA-003) 4/6/05	SG-190 (IA-003) 3/2/06	SG-190 (IA-003) 3/14/07	SG-190 (IA-003) 3/4/08	SG-191 (IA-004) 4/6/05	SG-191 (IA-004) 3/2/06	SG-191 (IA-004) 3/14/07	SG-191 (IA-004) 3/4/08
2,6-Dichloropyridine		**26**	**110**	2500 U		**5300**	**220**	**240**		8	10 U	98 U
2-Chloropyridine		**460**	**700**	**6400**		**360000**	**920**	**74000**		270	26	1700
1,1,1-Trichloroethane		1700 U	54 U	540 U		65 U	5.4 U	22 U		440 U	5.4 U	22 U
1,1,2,2-Tetrachloroethane		2200 U	180	680 U		82 U	14 U	28 U		550 U	14 U	28 U
1,1,2-Trichloro-1,2,2-Trifluoroethane		2500 U	160 U	760 U		92 U	16 U	31 U		610 U	16 U	31 U
1,1,2-Trichloroethane		1700 U	100 U	540 U		65 U	10 U	22 U		440 U	10 U	22 U
1,1-Dichloroethane		1300 U	80 U	400 U		49 U	8 U	16 U		320 U	8 U	16 U
1,1-Dichloroethene		1500	80 U	400 U		83	110	170		320 U	8 U	16 U
1,2,4-Trichlorobenzene		5900 U	140 U	1500 U		220 U	14 U	60 U		1500 U	14 U	60 U
1,2,4-Trimethylbenzene		1600 U	100 U	**2000**		59 U	10 U	20 U		390 U	10 U	20 U
1,2-Dibromoethane		2500 U	160 U	760 U		92 U	16 U	31 U		610 U	16 U	31 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane		2200 U	140 U	700 U		84 U	14 U	28 U		560 U	14 U	28 U
1,2-Dichlorobenzene		1900 U	120 U	600 U		72 U	12 U	24 U		480 U	12 U	24 U
1,2-Dichloroethane	8100 U	1300 U	80 U	400 U	81 U	49 U	8 U	16 U	400 U	320 U	**19**	16 U
1,2-Dichloroethene (total)	7900 U	1300 U			79 U	48 U			400 U	320 U		
1,2-Dichloropropane		1500 U	100 U	460 U		55 U	10 U	19 U		370 U	10 U	19 U
1,3,5-Trimethylbenzene		1600 U	100 U	**590**		59 U	10 U	20 U		390 U	10 U	20 U
1,3-Dichlorobenzene		1900 U	120 U	600 U		72 U	12 U	24 U		480 U	12 U	24 U
1,4-Dichlorobenzene		1900 U	120 U	600 U		72 U	12 U	24 U		480 U	12 U	24 U
1,4-Dioxane		29000 U				1100 U				7200 U		
2-Butanone		2400 U	60 U	920		88 U	92	120		590 U	6 U	19 U
2-Chlorotoluene		1700 U				62 U				410 U		
2-Hexanone		3300 U	80 U	400 U		120 U	8 U	16 U		820 U	8 U	16 U
2-Propanol		34000	2700	240000		3700	6600	18		7600	4100	9.6 U
4-Ethyltoluene		1600 U	100 U	520		59 U	10 U	20 U		390 U	10 U	20 U
4-Methyl-2-pentanone		3300 U	80 U	400 U		120 U	8 U	16 U		820 U	8 U	16 U
Acetone		19000 U	40 U	12000		710 U	76	93		4800 U	46	56
Allyl chloride		2500 U				94 U				630 U		
Benzene	6400 U	1000 U	1500	3800	210	**93**	130	**160**	320 U	260 U	6 U	13 U
Benzyl chloride			100 U	520 U			10 U	21 U			10 U	21 U
Bromodichloromethane	13000 U	2100 U	140 U	660 U	130 U	80 U	14 U	27 U	670 U	540 U	**120**	**81**
Bromoform	21000 U	3300 U		1100 U	210 U	120 U		41 U	1000 U	830 U		41 U
Bromomethane		1200 U	80 U	380 U		47 U	8 U	16 U		310 U	8 U	16 U
Butadiene, 1,3-		1800 U	40 U	220 U		66 U	4 U	8.8 U		440 U	4 U	8.8 U
Carbon Disulfide	**50000**	2500 U	330	5800	160 U	170	42	84	1000	620	6 U	13 U
Carbon Tetrachloride	13000 U	2000 U	62 U	620 U	**8800**	**4300**	**230**	**380**	630 U	500 U	**200**	**110**
Chlorobenzene	9200 U	1500 U	270	1500	830	1000	1000	**4700**	460 U	370 U	10 U	19 U
Chlorodibromomethane	17000 U	2700 U	180 U	860 U	170 U	100 U	18 U	35 U	850 U	680 U	18 U	35 U
Chloroethane		840 U	550	1300		32 U	10 U	11 U		210 U	10 U	11 U
Chloroform	**980000**	**250000**	**470000**	**1700000**	**18000**	**8800**	**4900**	**7600**	**73000**	**42000**	**51000**	**25000**
Chloromethane	10000 U	1700 U	78	**720**	100 U	62 U	4 U	8 U	520 U	410 U	4 U	8 U
Cis-1,2-Dichloroethene		1300 U	80 U	400 U		48 U	14	18		320 U	8 U	16 U
cis-1,3-Dichloropropene		1500 U	100 U	440 U		54 U	10 U	18 U		360 U	10 U	18 U
Cyclohexane		130000	150000	350000		93	6 U	110		280 U	6 U	14 U
Dichlorodifluoromethane		4000 U	100 U	1600		150 U	10 U	20 U		990 U	10 U	20 U
Ethylbenzene	8700 U	1400 U	110	**12000**	87 U	52 U	10	16	430 U	350 U	8 U	31

Table 4
Pathway Completeness and Risk Analysis
Production Area

	Soil Gas Samples											
	SG-189 (IA-002) 4/6/05	SG-189 (IA-002) 3/2/06	SG-189 (IA-002) 3/14/07	SG-189 (IA-002) 3/4/08	SG-190 (IA-003) 4/6/05	SG-190 (IA-003) 3/2/06	SG-190 (IA-003) 3/14/07	SG-190 (IA-003) 3/4/08	SG-191 (IA-004) 4/6/05	SG-191 (IA-004) 3/2/06	SG-191 (IA-004) 3/14/07	SG-191 (IA-004) 3/4/08
Ethanol			1500	360 U			8 U	15 U			8 U	15 U
Ethyl acetate			140 U	1300			14 U	24			14 U	18 U
Heptane		2000	1400	4000		49 U	24	16 U		330 U	14	16 U
Hexachlorobutadiene		3400 U	220 U	1100 U		130 U	22 U	43 U		850 U	22 U	43 U
Hexane		35000	48000	83000		110 U	49	36		700 U	8 U	15 U
Isooctane		1500 U				56 U				370 U		
Methyl Tertbutyl Ether		2900 U	80 U	360 U		110 U	8 U	15 U		720 U	8 U	15 U
Methylene Chloride	130000	5900	7600	38000	520	110	92	14 U	2700	690 U	6 U	14 U
o-Xylene		1400 U	80 U	1000		52 U	8 U	22		350 U	8 U	18 U
Propylene			40 U	5600			4 U	45			4 U	28 U
Styrene		1400 U	80 U	2600		51 U	8 U	53		340 U	8 U	17 U
t-Butyl alcohol		24000 U				910 U				6100 U		
Tetrachloroethene	88000	21000	9000	57000	6300	5600	3200	11000	1600	540 U	140	120
Tetrahydrofuran		24000 U	120 U	300 U		880 U	12 U	12 U		5900 U	12 U	12 U
Toluene	57000	9400 U	8100	64000	410	240 U	220	390	720	1100 U	8 U	16 U
trans-1,2-Dichloroethene		1300 U	80 U	400 U		48 U	8 U	16 U		320 U	8 U	16 U
trans-1,3-Dichloropropene		1500 U	100 U	440 U		54 U	10 U	18 U		360 U	10 U	18 U
Trichloroethene	11000 U	3400	4000	10000	160	170	98	130	540 U	430 U	180	110
Trichlorofluoromethane		1900	120 U	1900		67 U	12 U	23 U		450 U	12 U	23 U
Vinyl acetate			80 U	360 U			13	15 U			8 U	15 U
Vinyl bromide		1400 U				52 U				350 U		
Vinyl Chloride	5100 U	1400	2200	3500	89	38	56	76	260 U	200 U	6 U	11 U
Xylene, m/p		3500 U	190	3200		130 U	26	66		870 U	14	35 U
Xylenes, Total		1400 U				52 U				350 U		

Notes:

Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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

Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.

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

[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").

Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds

N - No; values that are bolded represent new findings as of the most recent sampling round

-- Not applicable

Table 4
Pathway Completeness and Risk Analysis
Production Area

	Outdoor Air													
	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Indoor Air > Outdoor Air?	Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?	Pathway Potentially Complete & Indoor Air > Highest of Background, Air Guideline, and Risk-Based Value?	Used in Manufacturing?
2,6-Dichloropyridine		0.46 U	1.2 U	**2**			Y	Y	--	Y	**Y**	**Y**	**Y**
2-Chloropyridine		2.3 U	**2.5**	**4.7**			Y	Y	--	Y	**Y**	**Y**	**Y**
1,1,1-Trichloroethane		1.1 U	0.68 U	0.25 U	<0.25 - 1.4		Y	Y	N	N	N		
1,1,2,2-Tetrachloroethane		1.4 U	1.8 U	0.31 U	<0.25		N			Y	N		
1,1,2-Trichloro-1,2,2-Trifluoroethane		1.5 U	2 U	0.66			Y	N	--	N	N		
1,1,2-Trichloroethane		1.1 U	1.3 U	0.25 U	<0.25		N			N	N		
1,1-Dichloroethane		0.81 U	1 U	0.18 U	<0.25		N			N	N		
1,1-Dichloroethene		0.79 U	1 U	0.18 U	<0.25		Y	N	Y	Y	N		
1,2,4-Trichlorobenzene		3.7 U	1.8 U	0.67 U			N			N	N		
1,2,4-Trimethylbenzene		1.5	1.3 U	0.58	0.78 - 4.4		Y	Y	Y	**Y**	**Y**	**Y**	N
1,2-Dibromoethane		1.5 U	2 U	0.35 U	<0.25		N			N	N		
1,2-Dichloro-1,1,2,2-tetrafluoroethane		1.4 U	1.8 U	0.32 U			N			N	N		
1,2-Dichlorobenzene		1.2 U	1.5 U	0.27 U	<0.25		N			N	N		
1,2-Dichloroethane	0.16 U	0.81 U	1 U	0.18 U	<0.25		Y	N	N	Y	N		
1,2-Dichloroethene (total)	0.16 U	0.79 U					N			N	N		
1,2-Dichloropropane		0.92 U	1.3 U	0.21 U	<0.25		N			N	N		
1,3,5-Trimethylbenzene		0.98 U	1.3 U	0.23 U	<0.25 - 1.7		Y	Y	Y	**Y**	**Y**	**Y**	N
1,3-Dichlorobenzene		1.2 U	1.5 U	0.27 U	<0.25		N			N	N		
1,4-Dichlorobenzene		1.2 U	1.5 U	0.27 U			N			N	N		
1,4-Dioxane		18 U					N			N	N		
2-Butanone		1.5 U	2.4	4.9			Y	Y	--	Y	**Y**	N	
2-Chlorotoluene		1 U					N			N	N		
2-Hexanone		2 U	1 U	0.81			Y	N	--	N	N		
2-Propanol		12 U	3.8	2.4			Y	Y	--	Y	**Y**	Y	N
4-Ethyltoluene		1.3	1.3 U	0.27			Y	Y	--	**Y**	**Y**	Y	N
4-Methyl-2-pentanone		2 U	1.6	0.32			Y	Y	--	N	N		
Acetone		12 U	14	66	10 - 46		Y	Y	N	Y	**Y**	N	
Allyl chloride		1.6 U					N			N	N		
Benzene	**1.7**	**2.4**	1.1	**1.7**	1.2 - 5.7		Y	N	N	Y	**Y**	N	
Benzyl chloride			1.3 U	0.24 U			N			N	N		
Bromodichloromethane	0.27 U	1.3 U	1.8 U	0.3 U			N			Y	N		
Bromoform	0.41 U	2.1 U		0.46 U			N			N	N		
Bromomethane		0.78 U	1 U	0.18 U	<0.25		N			N	N		
Butadiene, 1,3-		1.1 U	0.5 U	0.1 U			N			N	N		
Carbon Disulfide	1.6 U	1.6 U	0.75 U	0.15 U			Y	Y	--	Y	**Y**	N	
Carbon Tetrachloride	0.57	1.3 U	0.78 U	0.46	<0.25 - 0.68		Y	Y	Y	Y	**Y**	Y	N
Chlorobenzene	0.92 U	0.92 U	1.3 U	0.21 U	<0.25		Y	Y	Y	Y	**N**		
Chlorodibromomethane	0.34 U	1.7 U	2.3 U	0.39 U			N			N	N		
Chloroethane		0.53 U	1.3 U	0.12 U			N			Y	N		
Chloroform	0.2 U	0.98 U	**2.1**	**6.6**	<0.25 - 0.54		Y	Y	Y	Y	**Y**	Y	Y
Chloromethane	1 U	1.4	0.5 U	0.89	<0.25 - 2.0		Y	Y	N	Y	**Y**	N	
Cis-1,2-Dichloroethene		0.79 U	1 U	0.18 U	<0.25		N			Y	N		
cis-1,3-Dichloropropene		0.91 U	1.3 U	0.2 U			N			N	N		
Cyclohexane		0.69 U	0.75 U	1.9			**Y**	N		Y	**Y**	N	
Dichlorodifluoromethane		3.4	1.3 U	2.6			Y	Y	--	**Y**	**Y**	N	
Ethylbenzene	0.61	1.1 U	2.4	5.3	0.43 - 2.8		Y	Y	Y	Y	**Y**	**Y**	N

Table 4
Pathway Completeness and Risk Analysis
Production Area

	Outdoor Air													
	OA-001 4/6/05	OA-001 3/2/06	OA-001 3/14/07	OA-002 3/4/08	Published Background	NYSDOH Air Guideline	Detected in Indoor Air?	Indoor Air > Outdoor Air?	Indoor Air > Published Background or NYSDOH Guideline?	Detected in Soil Gas?	Pathway Potentially Complete?	Pathway Potentially Complete & Indoor Air > Highest of Background, Air Guideline, and Risk-Based Value?		Used in Manufacturing?	
Ethanol			33	0.46			Y	Y	--	Y	N				
Ethyl acetate			1.8 U	0.68			Y	N	--	**Y**	**Y**	N			
Heptane		0.86	1 U	0.57			Y	N	--	Y	**Y**	N			
Hexachlorobutadiene		2.1 U	2.8 U	0.48 U			N			N	N				
Hexane		2.4	1 U	3.1	0.63 - 6.5		Y	N	N	Y	**Y**	N			
Isooctane		1.9					N			N	N				
Methyl Tertbutyl Ether		1.8 U	1 U	0.17 U	<0.25 - 6.7		N			N	N				
Methylene Chloride	5.6 J	1.7 U	3.2	0.16 U	0.38 - 6.3	60	Y	Y	N	Y	**Y**	N			
o-Xylene		1.4 U	2.3	0.69	0.39 - 3.1		Y	Y	N	**Y**	**Y**	N			
Propylene			0.5 U	0.31 U			N			**Y**	N				
Styrene		0.85 U	1 U	0.19 U	<0.25 - 0.68		Y	Y	N	**Y**	**Y**	N			
t-Butyl alcohol		15 U					N			N	N				
Tetrachloroethene	0.36	1.4 U	0.85 U	1	<0.25 - 1.2	100	Y	Y	N	Y	**Y**	N			
Tetrahydrofuran		15 U	1.5 U	0.14 U			Y	Y	--	N	N				
Toluene	4.5 J	6.4 U	17	6.2	4.2 - 25		Y	N	N	Y	**Y**	N			
trans-1,2-Dichloroethene		0.79 U	1 U	0.18 U			N			N	N				
trans-1,3-Dichloropropene		0.91 U	1.3 U	0.2 U			N			N	N				
Trichloroethene	0.21 U	1.1 U	0.68 U	0.25 U	<0.25	5	Y	Y	N	Y	**Y**	N			
Trichlorofluoromethane		1.7	1.5	1.1			Y	Y	--	Y	**Y**	N			
Vinyl acetate			1 U	0.17 U			Y	Y	--	Y	N				
Vinyl bromide		0.87 U					N			N	N				
Vinyl Chloride	0.1 U	0.51 U	0.75 U	0.12 U	<0.25		N			Y	N				
Xylene, m/p		3.7 U	7.7	2.3			Y	Y	--	Y	**Y**	N			
Xylenes, Total		5.2 U					N			N	N				
											Excess Lifetime Cancer Risk [a]	4E-04	[b]	2E-06	[c]
											Hazard Index [a]	16	[b]	0.9	[c]

Notes:

Shaded values in Indoor Air, Soil Gas, or Outdoor Air indicate 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

Pathway is potentially complete if a constituent was detected in both soil gas and indoor air during the most recent sampling round.

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

[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 that are not associated with facility operations (i.e., risks are calculated for each constituent denoted with a "N").

Y - Yes; values that are bolded represent new findings as of the most recent sampling round; values that are italicized represent findings based on previous sampling rounds

N - No; values that are bolded represent new findings as of the most recent sampling round

-- Not applicable

Prepared by / Date: KJC 04/0908
Checked by / Date: JHP 04/16/08

APPENDIX A

METEROLOGICAL DATA

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Weather observations for the past three days

Greater Rochester International Airport

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Date	Time (est)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Temperature (°F) Air	Dwpt	6 hour Max.	6 hour Min.	Pressure altimeter (in.)	Pressure sea level (mb)	Precipitation (in.) 1 hr	3 hr	6 hr
05	10:54	W 13	10.00	Overcast	OVC010	27	21			29.60	1003.1			
05	09:54	W 7	9.00	Overcast	OVC014	26	21			29.56	1001.6		0.02	
05	08:54	NW 12	10.00	Light Snow	BKN010 OVC030	26	21			29.50	999.7			
05	07:54	NW 12	1.00	Light Snow Fog/Mist	BKN006 BKN012 BKN016 OVC140	29	26			29.48	998.8	0.02		
05	06:54	N 6	0.50	Snow Fog/Mist	VV003	30	27	32	28	29.43	997.3	0.05		0.11
05	05:54	N 10	5.00	Light Freezing Rain Snow	OVC005	31	28			29.42	996.9			
05	04:54	NE 10	7.00	Light Snow	BKN003 OVC008	32	29			29.42	996.7			
05	03:54	N 10	5.00	Light Freezing Drizzle Snow	BKN003 OVC010	31	28			29.44	997.5		0.06	
05	02:54	NE 9 G 17	5.00	Light Freezing Drizzle Snow	BKN007 OVC015	31	27			29.51	999.7			
05	01:54	NE 16 G 23	5.00	Light Freezing Rain	BKN007 OVC012	30	26			29.55	1001.3	0.06		
05	00:54	NE 20 G 26	9.00	Light Freezing Rain Snow	BKN005 OVC015	28	25	30	28	29.60	1003.2	0.02		0.20
04	23:54	NE 20 G 28	6.00	Light Freezing Rain Snow Fog/Mist	OVC006	28	25			29.66	1005.0	0.03		
04	22:54	NE 23 G 31	4.00	Fog/Mist and Breezy	OVC008	28	24			29.74	1007.9	0.03		
04	21:54	NE 24	4.00	Light Freezing Rain Fog/Mist and Breezy	OVC008	29	25			29.81	1009.9	0.01	0.12	
04	20:54	NE 24	6.00	Light Snow Fog/Mist and Breezy	BKN010 OVC014	29	25			29.85	1011.5	0.05		
04	19:54	NE 18 G 23	2.50	Fog/Mist	OVC012	30	26			29.89	1012.7	0.06		

04	18:54	NE 10	7.00	Light Freezing Rain	BKN048 OVC055	30	23	30	29	29.94	1014.4	0.01	0.01
04	17:54	E 14	10.00	Overcast	BKN055 OVC100	30	17			29.95	1014.8		
04	16:54	NE 13	10.00	Overcast	BKN060 OVC100	29	17			29.96	1015.2		
04	15:54	NE 13	10.00	Overcast	OVC060	29	17			29.99	1016.2		
04	14:54	NE 9	10.00	Overcast	OVC070	29	17			30.00	1016.6		
04	13:54	N 10	10.00	Overcast	FEW030 OVC080	29	18			30.03	1017.4		
04	12:54	N 9	10.00	Overcast	FEW030 BKN080 OVC100	30	17	32	29	30.05	1018.4		
04	11:54	N 10	10.00	Overcast	FEW025 OVC080	30	18			30.08	1019.0		
04	10:54	NW 8	10.00	Overcast	FEW025 BKN085 OVC110	30	20			30.10	1019.6		
04	09:54	NW 10	10.00	Overcast	FEW025 SCT100 OVC140	30	20			30.09	1019.5		
04	08:54	NW 10	10.00	Overcast	FEW020 BKN090 OVC110	30	21			30.09	1019.5		
04	07:54	NW 9	10.00	Overcast	FEW018 SCT080 OVC100	31	23			30.07	1018.6		
04	06:54	NW 8	10.00	Overcast	FEW021 BKN085 OVC100	32	25	36	32	30.03	1017.4		
04	05:54	W 12	9.00	Overcast	FEW015 SCT025 OVC075	32	26			30.01	1016.6		
04	04:54	W 7	5.00	Light Snow Fog/Mist	SCT008 BKN015 OVC065	32	29			29.98	1015.5		
04	03:54	W 10	3.00	Light Snow Fog/Mist	SCT007 BKN013 OVC046	33	29			29.94	1014.2		
04	02:54	W 13 G 18	9.00	Light Snow Drizzle	BKN009 OVC015	35	31			29.90	1012.8		
04	01:54	NW 10 G 21	10.00	Light Drizzle Snow	FEW010 OVC025	35	31			29.86	1011.3		
04	00:54	NW 15	10.00	Light Rain Snow	BKN008 OVC017	36	32	59	36	29.83	1010.2		
03	23:54	W 20 G 26	10.00	Light Rain	BKN011 BKN028 OVC080	50	45			29.75	1007.4		
03	22:54	W 20 G 29	10.00	Mostly Cloudy	FEW015 SCT090 BKN120	52	46			29.74	1007.3		
03	21:54	W 15	10.00	Overcast	BKN085 OVC110	54	39			29.74	1007.0		
03	20:54	S 12	10.00	Overcast	OVC080	56	33			29.71	1006.1		

03	19:54	S 12	10.00	Overcast	OVC080	57	33			29.73	1006.7		
03	18:54	S 8	10.00	Mostly Cloudy	BKN080	59	33	65	59	29.74	1007.0		
03	17:54	S 14 G 20	10.00	Partly Cloudy	FEW080 SCT120 SCT180	61	34			29.74	1007.1		
03	16:54	S 14	10.00	Partly Cloudy	FEW080 SCT140 SCT180	64	36			29.73	1006.7		
03	15:54	S 16 G 22	10.00	Mostly Cloudy	FEW200 BKN250	64	37			29.75	1007.5		
03	14:54	SW 17 G 29	10.00	Overcast	SCT200 OVC250	63	37			29.77	1008.2		
03	13:54	SW 16 G 21	10.00	Mostly Cloudy	FEW100 BKN250	64	37			29.81	1009.5		
03	12:54	S 14	10.00	Partly Cloudy	FEW110 SCT250	62	35	62	46	29.84	1010.5		
03	11:54	S 16 G 24	10.00	Partly Cloudy	FEW110 SCT250	59	34			29.86	1011.6		
03	10:54	S 14	10.00	Partly Cloudy	FEW110 SCT250	55	32			29.87	1012.0		
03	09:54	S 17 G 22	10.00	Overcast	FEW090 OVC110	50	30			29.91	1013.2		
03	08:54	S 16 G 22	10.00	Overcast	FEW080 OVC100	49	28			29.91	1013.3		
03	07:54	S 17 G 23	10.00	Mostly Cloudy	BKN095 BKN200	47	28			29.91	1013.2		
03	06:54	S 10	10.00	Mostly Cloudy	FEW070 BKN100 BKN250	46	27	46	31	29.91	1013.4		0.09
03	05:54	S 13	10.00	Mostly Cloudy	BKN100 BKN140	43	29			29.93	1014.1		
03	04:54	S 7	10.00	Overcast	FEW070 OVC085	38	31			29.96	1015.2	0.01	
03	03:54	S 7	8.00	Light Rain	FEW035 BKN040 OVC048	36	30			29.98	1015.8	0.08	0.08
03	02:54	SW 7	9.00	Light Rain	FEW043 BKN075 OVC085	34	23			30.02	1017.0		
03	01:54	SE 6	10.00	Overcast	SCT060 OVC080	34	20			30.05	1018.1		
03	00:54	SE 7	10.00	Mostly Cloudy	FEW080 BKN100 BKN250	31	20	32	31	30.06	1018.6		
02	23:54	SE 7	10.00	Fair	CLR	31	20			30.08	1019.4		
02	22:54	SE 8	10.00	Fair	CLR	31	20			30.12	1020.8		
02	21:54	E 10	10.00	Mostly Cloudy	BKN120	32	20			30.16	1021.8		
02	20:54	SE 8	10.00	Overcast	BKN060 OVC120	32	20			30.18	1022.7		
02	19:54	SE 14	10.00	Overcast	OVC120	32	19			30.19	1023.1		
02	18:54	E 12	10.00	Overcast	OVC120	32	18	34	32	30.22	1024.0		

02	17:54	SE 12	10.00	Mostly Cloudy	BKN090 BKN110	33	18			30.23	1024.5			
02	16:54	SE 5	10.00	Overcast	BKN085 OVC110	34	18			30.25	1025.1			
02	15:54	Vrbl 6	10.00	Mostly Cloudy	FEW090 BKN110	34	18			30.26	1025.5			
02	14:54	SE 7	10.00	Mostly Cloudy	FEW075 BKN100 BKN250	33	17			30.28	1026.1			
02	13:54	SE 5	10.00	Overcast	FEW090 SCT150 OVC250	33	19			30.29	1026.4			
02	12:54	SW 3	10.00	Mostly Cloudy	FEW034 BKN250	32	17	34	23	30.30	1026.9			
02	11:54	Calm	10.00	Mostly Cloudy	SCT028 BKN250	33	17			30.32	1027.3			
Date	Time (est)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Air	Dwpt	Max. 6 hour	Min. 6 hour	altimeter (in.)	sea level (mb)	1 hr	3 hr	6 hr
						Temperature (°F)				Pressure		Precipitation (in.)		

National Weather Service
Southern Region Headquarters
Fort Worth, Texas
Disclaimer

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APPENDIX B

FIELD DATA RECORDS

Site Location: ARCH Chemical, Rochester, N.Y.				Sampled By: Wolfgang Calicchio			
Project Number: 3616036009.01				Sampling Date: 3/4/2008			
Sample ID	Sampling Location (can / flow)		Start Time	End Time	Total Sample Time	Canister Start Pressure (in. Hg)	Canister End Pressure (in. Hg)
IA-08-002 BC1607	Location 1 can	BC ~~3300~~ 3281	0920	1722	Hrs. mins.	-29.3	-4.8"
SG-08-189 BC1450	Location 1 can	BC 3039	0920	1620	Hrs. mins.	-29.3	-4.4
IA-08-003 1453	Location 2 can	3231	0935	1517	Hrs. mins.	-29.3	-3.2
SG-08-190 1489	Location 2 can	3054	0935	1419	Hrs. mins.	-29.1	-2.5
IA-08-004 1247	Location 3 can	3314	0938	1649	Hrs. mins.	-29.1	-6.6
SG-08-191 1467	Location 3 can	3322	0938	1615	Hrs. mins.	-29.1	-4.6
IA-08-005 1660	Location 4 can	3027	0947	1804	Hrs. mins.	-29.1	-3.8
SG-08-192 1157	Location 4 can	3323	0947	1533	Hrs. mins.	-29.2	-1.0
IA-08-001 1665	Location 5 can	3313	1003	1733	Hrs. mins.	-29.1	-11.0
SG-08-188 1190	Location 5 can	3170	1003	1709	Hrs. mins.	-29.1	-5.0
IA-08-006 1165	Location 6 can	3028	0953	1806	Hrs. mins.	-29.2	-2.3
SG-08-193 1305	Location 6 can	3021	0953	1806	Hrs. mins.	-29.1	-4.8
OA-08-002 BC1318	Background can	BC3230	0725	1430	Hrs. mins.	-29.5"	-3.5"
IA-08-002DUP 1064	Location 1 DUP	3188	0920	~~1430~~ 1722	Hrs. mins.	-29.1	~~-3.5"~~ -4.9"
				ⓦ	Hrs. mins.		
					Hrs. mins.		
					Hrs. mins.		
					Hrs. mins.		
Comments:							

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Email: info@contestlabs.com
www.contestlabs.com
39 SPRUCE ST
EAST LONGMEADOW, MA 01028

AIR SAMPLE CHAIN OF CUSTODY RECORD

LIMS - 14062

Company Name: MACTEC
Address: 511 CONGRESS STR. PORTLAND, ME 04101
Attention: JEFF BRANDOW
Project Location: ARCH ROCHESTER, NY
Sampled By: WOLFGANG CALLEMIN

Telephone: (207) 775-5401
Project # 36160360009.01
Client PO #

DATA DELIVERY (check one):
☐FAX ☐EMAIL ☐WEBSITE CLIENT
Fax #: (207) 772-4762
Email:
Format: ☒EXCEL ☒PDF ☐ GIS KEY ☐ OTHER

Proposal Provided? (For Billing purposes)
☐ yes _____ proposal date

ANALYSIS REQUESTED

TO-15 plus chlorofluorides

Please fill out completely, sign, date and retain the yellow copy for your record.

Summa canisters and flow controllers must be returned within 14 days of receipt or rental fees will apply.

Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.

Field ID	Sample Description	Media	Lab #	Date Sampled Start Date Time	Date Sampled Stop Date Time	ONLY USE WHEN USING PUMPS Total Minutes Sampled	Flow Rate M^3/Min. or L / Min.	Volume Liters or M^3	Matrix Code*	" Hg Initial pressure	" Hg Final Pressure	Lab Receipt Pressure	Summa Canister ID	Flow Controller ID
	IA-08-002	IA	08B07783	3/4/08 0920	3/4/08 1722				IA	-29.3	-4.8		1607	3281
	IA-08-002DUP	IA	84	3/4/08 0920	3/4/08 1722				IA	-29.1	-4.9		1664	3188
	SG-08-189	SG	85	3/4/08 0920	3/4/08 1620				SG	-29.3	-4.4		1450	3039
	IA-08-003	IA	86	3/4/08 0935	3/4/08 1517				IA	-29.3	-3.2		1653	3231
	SG-08-190	SG	87	3/4/08 0935	3/4/08 1419				SG	-29.1	-2.5		1489	3054
	IA-08-004	IA	88	3/4/08 0938	3/4/08 1649				IA	-29.1	-6.4		1247	3314
	SG-08-191	SG	89	3/4/08 0938	3/4/08 1615				SG	-29.1	-4.6		1467	3322
	IA-08-005	IA	90	3/4/08 0947	3/4/08 1804				IA	-29.1	-3.8		1660	3027

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature)	Date/Time:
	3/4/08 1830
Received by: (signature)	Date/Time:
	3/5/08 1011
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround **
☐ 7-Day
☐ 10-Day
Other 5d

RUSH * AR 3/11
☐ *24-Hr ☐ *48-Hr
☐ *72-Hr ☐ *4-Day
*Approval Required

Special Requirements
Regulations:
Data Enhancement/RCP? ☐ Y ☐ N
Enhanced Data Package ☐ Y ☐ N
(Surchage Applies)
Required Detection Limits:
Other: Refer to contract please

***Matrix Code:**
SG= SOIL GAS
IA= INDOOR AIR
AMB=AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = other

****Media Codes:**
S=summa can
T=tedlar bag
P=PUF
T=tube
F= filter
C=cassette
O = Other

** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

AIHA, NELAC & WBE/DBE Certified

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Email: info@contestlabs.com
www.contestlabs.com
39 SPRUCE ST
EAST LONGMEADOW, MA 01028

AIR SAMPLE CHAIN OF CUSTODY RECORD

LSMT-14062

Company Name: MACTEC
Address: 511 CONGRESS STR. PORTLAND, ME 04101
Attention: JEFF BRANDOW
Project Location: ARCH ROCHESTER, NY
Sampled By: WOLFGANG CALICCHIO

Telephone: (207) 775-5401
Project # 3616036009.01
Client PO #

DATA DELIVERY (check one):
☐FAX ☐EMAIL ☐WEBSITE CLIENT
Fax #: (207) 772-4762
Email:
Format: ☒EXCEL ☒PDF ☐GIS KEY ☐OTHER

Proposal Provided? (For Billing purposes)
☐ yes _____ proposal date

Field ID	Sample Description	Media	Lab #	Date Sampled Start Date Time	Date Sampled Stop Date Time	ONLY USE WHEN USING PUMPS Total Minutes Sampled	Flow Rate M^3/Min. or L/Min.	Volume Liters or M^3	Matrix Code*	ANALYSIS REQUESTED TO-15 plus chlorpyrifos	"Hg Initial pressure	"Hg Final pressure	Lab Receipt Pressure	Summa Canister ID	Flow Controller ID
	SG-08-192	S	08807791	3/4/08 0947	3/4/08 1533				SG	X	-29.2	-1.0		BC 1157	BC 3323
	IA-08-001		92	3/4/08 1003	3/4/08 1733				IA	X	-29.1	-11.0		1665	3313 3027 (3)
	SG-08-188		93	3/4/08 1003	3/4/08 1709				SG	X	-29.1	-5.0		1190	3170
	IA-08-006		94	3/4/08 0953	3/4/08 1806				IA	X	-29.2	-2.3		1165	3028
	SG-08-193		95	3/4/08 0935	3/4/08 1806				SG	X	-29.1	-4.7		1305	3021
	OA-08-002		96	3/4/08 0725	3/4/08 1430				AMB	X	-25.5	-3.5		1318	3230

Please fill out completely, sign, date and retain the yellow copy for your record.
Summa canisters and flow controllers must be returned within 14 days of receipt or rental fees will apply.
Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time: 3/5/08 1011
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround **
☐ 7-Day
☐ 10-Day
☒ Other Std
RUSH * NP 3/11
☐ *24-Hr ☐ *48-Hr
☐ *72-Hr ☐ *4-Day
*Approval Required

Special Requirements
Regulations:
Data Enhancement/RCP? ☐ Y ☐ N
Enhanced Data Package ☐ Y ☐ N
(Surchage Applies)
Required Detection Limits:
Other: Refer to contract plan

*Matrix Code:
SG= SOIL GAS
IA= INDOOR AIR
AMB=AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = other

**Media Codes:
S=summa can
T=tedlar bag
P=PUF
T=tube
F= filter
C=cassette
O = Other

** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

AIHA, NELAC & WBE/DBE Certified

APPENDIX C

LABORATORY ANALYTICAL REPORTS

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ANALYTICAL LABORATORY
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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08--006
Sample ID : 08B07794
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/16/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)		REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	1800	E	18.2
2,6-DICHLOROPYRIDINE	570	E	24.5

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-001
Sample ID : 08B07792
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/16/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	4.7	0.82
2,6-DICHLOROPYRIDINE	3.1	1.1

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002
Sample ID : 08B07783
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/15/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	340	18.2
2,6-DICHLOROPYRIDINE	95	24.6

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002DUP
Sample ID : 08B07784
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/15/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	320	18.2
2,6-DICHLOROPYRIDINE	79	24.6

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-003
Sample ID : 08B07786
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/15/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	350	18.2
2,6-DICHLOROPYRIDINE	330	24.6

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-004
Sample ID : 08B07788
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/15/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	23	18.2
2,6-DICHLOROPYRIDINE	20	1.1

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-005
Sample ID : 08B07790
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/15/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	24	18.2
2,6-DICHLOROPYRIDINE	9.7	1.1

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : OA-08-002
Sample ID : 08B07796
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/17/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	4.7	0.82
2,6-DICHLOROPYRIDINE	2.0	1.1

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	9.42	104
2,6-DICHLOROPYRIDINE	12.25	16.05	131

RL = Reporting Limit

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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-188
Sample ID : 08B07793
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/16/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	4.9	1.6
2,6-DICHLOROPYRIDINE	ND	2.2

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-189
Sample ID : 08B07785
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/15/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	6400	1800
2,6-DICHLOROPYRIDINE	ND	2500

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	9.00	98.9
2,6-DICHLOROPYRIDINE	12.25	12.78	104

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PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-190
Sample ID : 08B07787
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/16/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)		REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	74000	E	73
2,6-DICHLOROPYRIDINE	240		98

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

RL = Reporting Limit
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PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-191
Sample ID : 08B07789
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/16/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)		REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	1700	E	73
2,6-DICHLOROPYRIDINE	ND		98

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

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PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-192
Sample ID : 08B07791
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/16/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	9.4	1.6
2,6-DICHLOROPYRIDINE	ND	2.2

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	12.04	132
2,6-DICHLOROPYRIDINE	12.25	14.49	118

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-193
Sample ID : 08B07795
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
SPECIAL TEST			03/14/08	TPH				

RESULTS FOR PYRIDINES

ANALYTE	SAMPLE RESULTS (ug/m^3)		REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	5100	E	73
2,6-DICHLOROPYRIDINE	ND		98

RESULTS FOR METHOD BLANK

ANALYTE	SAMPLE RESULTS (ug/m^3)	REPORTING LIMIT (ug/m^3)
2-CHLOROPYRIDINE	ND	0.46
2,6-DICHLOROPYRIDINE	ND	0.61

RESULTS FOR LFB
PERCENT RECOVERY

ANALYTE	TRUE VALUE	RESULT	%REC
2-CHLOROPYRIDINE	9.10	9.42	104
2,6-DICHLOROPYRIDINE	12.25	16.05	131

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08--006
Sample ID : 08B07794
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	120	03/16/08	TPH	0.11			
Benzene	ug/m3	1.7	03/16/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/16/08	TPH	0.24			
Bromodichloromethane	ug/m3	ND	03/16/08	TPH	0.30			
Bromoform	ug/m3	ND	03/16/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/16/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/16/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	10	03/16/08	TPH	0.21			
Carbon Disulfide	ug/m3	0.72	03/16/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	1.5	03/16/08	TPH	0.28			
Chlorobenzene	ug/m3	ND	03/16/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/16/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/16/08	TPH	0.12			
Chloroform	ug/m3	87	03/16/08	TPH	0.22			
Chloromethane	ug/m3	ND	03/16/08	TPH	0.09			
Cyclohexane	ug/m3	2.8	03/16/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/16/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	2.4	03/16/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/16/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/16/08	TPH	0.32			

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08--006
Sample ID : 08B07794
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	180	03/16/08	TPH	0.09			
Ethyl Acetate	ug/m3	ND	03/16/08	TPH	0.17			
Ethylbenzene	ug/m3	2.4	03/16/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	130	03/16/08	TPH	0.23			
n-Heptane	ug/m3	1.6	03/16/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/16/08	TPH	0.48			
Hexane	ug/m3	240	03/16/08	TPH	0.17			
2-Hexanone	ug/m3	ND	03/16/08	TPH	0.18			
Isopropanol	ug/m3	37	03/16/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/16/08	TPH	0.17			
Methylene Chloride	ug/m3	110	03/16/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	0.66	03/16/08	TPH	0.18			
Propene	ug/m3	ND	03/16/08	TPH	0.31			
Styrene	ug/m3	1.3	03/16/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/16/08	TPH	0.31			
Tetrachloroethylene	ug/m3	0.60	03/16/08	TPH	0.31			
Tetrahydrofuran	ug/m3	0.89	03/16/08	TPH	0.14			
Toluene	ug/m3	5.8	03/16/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/16/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.25			
Trichloroethylene	ug/m3	ND	03/16/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	1.9	03/16/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.57	03/16/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	300	03/16/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	150	03/16/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/16/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/16/08	TPH	0.12			
m/p-Xylene	ug/m3	6.7	03/16/08	TPH	0.39			
o-Xylene	ug/m3	7.4	03/16/08	TPH	0.20			

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08--006

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-001
Sample ID : 08B07792
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	15	03/16/08	TPH	0.11			
Benzene	ug/m3	0.92	03/16/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/16/08	TPH	0.24			
Bromodichloromethane	ug/m3	ND	03/16/08	TPH	0.30			
Bromoform	ug/m3	ND	03/16/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/16/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/16/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	1.6	03/16/08	TPH	0.21			
Carbon Disulfide	ug/m3	0.21	03/16/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	0.41	03/16/08	TPH	0.28			
Chlorobenzene	ug/m3	ND	03/16/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/16/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/16/08	TPH	0.12			
Chloroform	ug/m3	0.38	03/16/08	TPH	0.22			
Chloromethane	ug/m3	0.76	03/16/08	TPH	0.09			
Cyclohexane	ug/m3	0.77	03/16/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/16/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	3.0	03/16/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/16/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/16/08	TPH	0.32			

RL = Reporting Limit

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-001
Sample ID : 08B07792
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	81	03/16/08	TPH	0.09			
Ethyl Acetate	ug/m3	ND	03/16/08	TPH	0.17			
Ethylbenzene	ug/m3	0.40	03/16/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	ND	03/16/08	TPH	0.23			
n-Heptane	ug/m3	0.43	03/16/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/16/08	TPH	0.48			
Hexane	ug/m3	3.6	03/16/08	TPH	0.17			
2-Hexanone	ug/m3	ND	03/16/08	TPH	0.18			
Isopropanol	ug/m3	9.7	03/16/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/16/08	TPH	0.17			
Methylene Chloride	ug/m3	5.3	03/16/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/16/08	TPH	0.18			
Propene	ug/m3	ND	03/16/08	TPH	0.31			
Styrene	ug/m3	0.21	03/16/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/16/08	TPH	0.31			
Tetrachloroethylene	ug/m3	ND	03/16/08	TPH	0.31			
Tetrahydrofuran	ug/m3	ND	03/16/08	TPH	0.14			
Toluene	ug/m3	3.6	03/16/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/16/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.25			
Trichloroethylene	ug/m3	ND	03/16/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	7.3	03/16/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.54	03/16/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	0.68	03/16/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	ND	03/16/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/16/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/16/08	TPH	0.12			
m/p-Xylene	ug/m3	1.2	03/16/08	TPH	0.39			
o-Xylene	ug/m3	0.43	03/16/08	TPH	0.20			

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* = See end of report for comments and notes applying to this sample

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-001

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

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511 CONGRESS STREET
PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002
Sample ID : 08B07783
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	25	03/15/08	TPH	0.43			
Benzene	ug/m3	3.2	03/15/08	TPH	0.58			
Benzyl Chloride	ug/m3	ND	03/15/08	TPH	0.94			
Bromodichloromethane	ug/m3	ND	03/15/08	TPH	1.3			
Bromoform	ug/m3	ND	03/15/08	TPH	1.9			
Bromomethane	ug/m3	ND	03/15/08	TPH	0.70			
1,3-Butadiene	ug/m3	ND	03/15/08	TPH	0.40			
2-Butanone (MEK)	ug/m3	5.3	03/15/08	TPH	0.54			
Carbon Disulfide	ug/m3	ND	03/15/08	TPH	0.57			
Carbon Tetrachloride	ug/m3	1.3	03/15/08	TPH	1.2			
Chlorobenzene	ug/m3	ND	03/15/08	TPH	0.83			
Chlorodibromomethane	ug/m3	ND	03/15/08	TPH	1.6			
Chloroethane	ug/m3	ND	03/15/08	TPH	0.48			
Chloroform	ug/m3	4.7	03/15/08	TPH	0.87			
Chloromethane	ug/m3	1.4	03/15/08	TPH	0.37			
Cyclohexane	ug/m3	ND	03/15/08	TPH	0.63			
1,2-Dibromoethane	ug/m3	ND	03/15/08	TPH	1.4			
1,2-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	1.1			
1,3-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	1.1			
1,4-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	1.1			
Dichlorodifluoromethane	ug/m3	2.9	03/15/08	TPH	0.89			
1,1-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.73			
1,2-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.73			
1,1-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.72			
cis-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.72			
t-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.72			
1,2-Dichloropropane	ug/m3	ND	03/15/08	TPH	0.84			
cis-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.82			
trans-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.82			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/15/08	TPH	1.3			

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002
Sample ID : 08B07783
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	8.5	03/15/08	TPH	0.35			
Ethyl Acetate	ug/m3	0.73	03/15/08	TPH	0.65			
Ethylbenzene	ug/m3	2.2	03/15/08	TPH	0.79			
4-Ethyl Toluene	ug/m3	1.5	03/15/08	TPH	0.89			
n-Heptane	ug/m3	ND	03/15/08	TPH	0.74			
Hexachlorobutadiene	ug/m3	ND	03/15/08	TPH	2.0			
Hexane	ug/m3	1.7	03/15/08	TPH	0.63			
2-Hexanone	ug/m3	1.1	03/15/08	TPH	0.74			
Isopropanol	ug/m3	18	03/15/08	TPH	0.45			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/15/08	TPH	0.65			
Methylene Chloride	ug/m3	2.3	03/15/08	TPH	0.63			
4-Methyl-2-Pentanone (MIBK)	ug/m3	0.76	03/15/08	TPH	0.74			
Propene	ug/m3	ND	03/15/08	TPH	0.31			
Styrene	ug/m3	0.97	03/15/08	TPH	0.77			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/15/08	TPH	1.3			
Tetrachloroethylene	ug/m3	ND	03/15/08	TPH	1.3			
Tetrahydrofuran	ug/m3	0.63	03/15/08	TPH	0.54			
Toluene	ug/m3	6.6	03/15/08	TPH	0.68			
1,2,4-Trichlorobenzene	ug/m3	ND	03/15/08	TPH	1.4			
1,1,1-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.99			
1,1,2-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.99			
Trichloroethylene	ug/m3	ND	03/15/08	TPH	0.97			
Trichlorofluoromethane	ug/m3	1.5	03/15/08	TPH	1.00			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/15/08	TPH	1.4			
1,2,4-Trimethylbenzene	ug/m3	4.5	03/15/08	TPH	0.89			
1,3,5-Trimethylbenzene	ug/m3	1.7	03/15/08	TPH	0.89			
Vinyl Acetate	ug/m3	ND	03/15/08	TPH	0.64			
Vinyl Chloride	ug/m3	ND	03/15/08	TPH	0.47			
m/p-Xylene	ug/m3	7.8	03/15/08	TPH	1.6			
o-Xylene	ug/m3	3.0	03/15/08	TPH	0.79			

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002DUP
Sample ID : 08B07784
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	24	03/15/08	TPH	0.11			
Benzene	ug/m3	3.0	03/15/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/15/08	TPH	0.24			
Bromodichloromethane	ug/m3	0.39	03/15/08	TPH	0.30			
Bromoform	ug/m3	ND	03/15/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/15/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/15/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	7.7	03/15/08	TPH	0.21			
Carbon Disulfide	ug/m3	ND	03/15/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	0.88	03/15/08	TPH	0.28			
Chlorobenzene	ug/m3	0.49	03/15/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/15/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/15/08	TPH	0.12			
Chloroform	ug/m3	4.6	03/15/08	TPH	0.22			
Chloromethane	ug/m3	1.5	03/15/08	TPH	0.09			
Cyclohexane	ug/m3	0.37	03/15/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/15/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	2.6	03/15/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/15/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/15/08	TPH	0.32			

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002DUP
Sample ID : 08B07784
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	11	03/15/08	TPH	0.09			
Ethyl Acetate	ug/m3	ND	03/15/08	TPH	0.17			
Ethylbenzene	ug/m3	1.9	03/15/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	1.2	03/15/08	TPH	0.23			
n-Heptane	ug/m3	0.41	03/15/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/15/08	TPH	0.48			
Hexane	ug/m3	1.7	03/15/08	TPH	0.17			
2-Hexanone	ug/m3	1.0	03/15/08	TPH	0.18			
Isopropanol	ug/m3	19	03/15/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/15/08	TPH	0.17			
Methylene Chloride	ug/m3	2.8	03/15/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	0.36	03/15/08	TPH	0.18			
Propene	ug/m3	ND	03/15/08	TPH	0.31			
Styrene	ug/m3	0.61	03/15/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/15/08	TPH	0.31			
Tetrachloroethylene	ug/m3	0.71	03/15/08	TPH	0.31			
Tetrahydrofuran	ug/m3	0.33	03/15/08	TPH	0.14			
Toluene	ug/m3	6.2	03/15/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/15/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
Trichloroethylene	ug/m3	0.48	03/15/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	1.4	03/15/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.55	03/15/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	4.7	03/15/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	1.4	03/15/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/15/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/15/08	TPH	0.12			
m/p-Xylene	ug/m3	7.0	03/15/08	TPH	0.39			
o-Xylene	ug/m3	2.6	03/15/08	TPH	0.20			

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-002DUP

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-003
Sample ID : *08B07786
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	22	03/15/08	TPH	0.11			
Benzene	ug/m3	1.3	03/15/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/15/08	TPH	0.24			
Bromodichloromethane	ug/m3	ND	03/15/08	TPH	0.30			
Bromoform	ug/m3	ND	03/15/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/15/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/15/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	17	03/15/08	TPH	0.21			
Carbon Disulfide	ug/m3	0.94	03/15/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	2.0	03/15/08	TPH	0.28			
Chlorobenzene	ug/m3	ND	03/15/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/15/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/15/08	TPH	0.12			
Chloroform	ug/m3	12	03/15/08	TPH	0.22			
Chloromethane	ug/m3	0.95	03/15/08	TPH	0.09			
Cyclohexane	ug/m3	0.30	03/15/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/15/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	2.5	03/15/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/15/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/15/08	TPH	0.32			

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-003
Sample ID : *08B07786
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	11	03/15/08	TPH	0.09			
Ethyl Acetate	ug/m3	2.3	03/15/08	TPH	0.17			
Ethylbenzene	ug/m3	0.85	03/15/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	0.70	03/15/08	TPH	0.23			
n-Heptane	ug/m3	0.42	03/15/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/15/08	TPH	0.48			
Hexane	ug/m3	2.0	03/15/08	TPH	0.17			
2-Hexanone	ug/m3	0.18	03/15/08	TPH	0.18			
Isopropanol	ug/m3	3500	03/15/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/15/08	TPH	0.17			
Methylene Chloride	ug/m3	10	03/15/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	1.1	03/15/08	TPH	0.18			
Propene	ug/m3	ND	03/15/08	TPH	0.31			
Styrene	ug/m3	0.26	03/15/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/15/08	TPH	0.31			
Tetrachloroethylene	ug/m3	0.56	03/15/08	TPH	0.31			
Tetrahydrofuran	ug/m3	9.8	03/15/08	TPH	0.14			
Toluene	ug/m3	4.8	03/15/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/15/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
Trichloroethylene	ug/m3	0.56	03/15/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	1.5	03/15/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.58	03/15/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	2.2	03/15/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	0.68	03/15/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/15/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/15/08	TPH	0.12			
m/p-Xylene	ug/m3	2.4	03/15/08	TPH	0.39			
o-Xylene	ug/m3	0.74	03/15/08	TPH	0.20			

RL = Reporting Limit
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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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ANALYTICAL LABORATORY

39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-003

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

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PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-004
Sample ID : 08B07788
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	78	03/15/08	TPH	0.11			
Benzene	ug/m3	1.1	03/15/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/15/08	TPH	0.24			
Bromodichloromethane	ug/m3	ND	03/15/08	TPH	0.30			
Bromoform	ug/m3	ND	03/15/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/15/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/15/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	4.5	03/15/08	TPH	0.21			
Carbon Disulfide	ug/m3	ND	03/15/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	0.50	03/15/08	TPH	0.28			
Chlorobenzene	ug/m3	ND	03/15/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/15/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/15/08	TPH	0.12			
Chloroform	ug/m3	1.2	03/15/08	TPH	0.22			
Chloromethane	ug/m3	0.96	03/15/08	TPH	0.09			
Cyclohexane	ug/m3	0.62	03/15/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/15/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	2.5	03/15/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/15/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/15/08	TPH	0.32			

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PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-004
Sample ID : 08B07788
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	91	03/15/08	TPH	0.09			
Ethyl Acetate	ug/m3	2.6	03/15/08	TPH	0.17			
Ethylbenzene	ug/m3	0.94	03/15/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	0.92	03/15/08	TPH	0.23			
n-Heptane	ug/m3	0.70	03/15/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/15/08	TPH	0.48			
Hexane	ug/m3	2.0	03/15/08	TPH	0.17			
2-Hexanone	ug/m3	0.32	03/15/08	TPH	0.18			
Isopropanol	ug/m3	25	03/15/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/15/08	TPH	0.17			
Methylene Chloride	ug/m3	6.3	03/15/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	0.36	03/15/08	TPH	0.18			
Propene	ug/m3	ND	03/15/08	TPH	0.31			
Styrene	ug/m3	0.25	03/15/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/15/08	TPH	0.31			
Tetrachloroethylene	ug/m3	0.73	03/15/08	TPH	0.31			
Tetrahydrofuran	ug/m3	0.41	03/15/08	TPH	0.14			
Toluene	ug/m3	4.0	03/15/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/15/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
Trichloroethylene	ug/m3	ND	03/15/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	1.5	03/15/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.60	03/15/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	4.1	03/15/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	1.5	03/15/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/15/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/15/08	TPH	0.12			
m/p-Xylene	ug/m3	3.6	03/15/08	TPH	0.39			
o-Xylene	ug/m3	1.2	03/15/08	TPH	0.20			

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PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-004

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-005
Sample ID : 08B07790
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	40	03/15/08	TPH	0.11			
Benzene	ug/m3	1.2	03/15/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/15/08	TPH	0.24			
Bromodichloromethane	ug/m3	ND	03/15/08	TPH	0.30			
Bromoform	ug/m3	ND	03/15/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/15/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/15/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	5.6	03/15/08	TPH	0.21			
Carbon Disulfide	ug/m3	ND	03/15/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	0.54	03/15/08	TPH	0.28			
Chlorobenzene	ug/m3	ND	03/15/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/15/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/15/08	TPH	0.12			
Chloroform	ug/m3	0.95	03/15/08	TPH	0.22			
Chloromethane	ug/m3	0.85	03/15/08	TPH	0.09			
Cyclohexane	ug/m3	0.58	03/15/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/15/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	2.5	03/15/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/15/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/15/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/15/08	TPH	0.32			

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PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-005
Sample ID : 08B07790
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	90	03/15/08	TPH	0.09			
Ethyl Acetate	ug/m3	22	03/15/08	TPH	0.17			
Ethylbenzene	ug/m3	1.7	03/15/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	11	03/15/08	TPH	0.23			
n-Heptane	ug/m3	2.4	03/15/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/15/08	TPH	0.48			
Hexane	ug/m3	ND	03/15/08	TPH	0.17			
2-Hexanone	ug/m3	0.39	03/15/08	TPH	0.18			
Isopropanol	ug/m3	41	03/15/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/15/08	TPH	0.17			
Methylene Chloride	ug/m3	0.85	03/15/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/15/08	TPH	0.18			
Propene	ug/m3	ND	03/15/08	TPH	0.31			
Styrene	ug/m3	0.25	03/15/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/15/08	TPH	0.31			
Tetrachloroethylene	ug/m3	ND	03/15/08	TPH	0.31			
Tetrahydrofuran	ug/m3	0.34	03/15/08	TPH	0.14			
Toluene	ug/m3	6.2	03/15/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/15/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/15/08	TPH	0.25			
Trichloroethylene	ug/m3	ND	03/15/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	2.0	03/15/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.59	03/15/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	40	03/15/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	13	03/15/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/15/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/15/08	TPH	0.12			
m/p-Xylene	ug/m3	4.3	03/15/08	TPH	0.39			
o-Xylene	ug/m3	1.7	03/15/08	TPH	0.20			

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : IA-08-005

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : OA-08-002
Sample ID : 08B07796
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	66	03/18/08	TPH	0.11			
Benzene	ug/m3	1.7	03/18/08	TPH	0.15			
Benzyl Chloride	ug/m3	ND	03/18/08	TPH	0.24			
Bromodichloromethane	ug/m3	ND	03/18/08	TPH	0.30			
Bromoform	ug/m3	ND	03/18/08	TPH	0.46			
Bromomethane	ug/m3	ND	03/18/08	TPH	0.18			
1,3-Butadiene	ug/m3	ND	03/18/08	TPH	0.10			
2-Butanone (MEK)	ug/m3	4.9	03/18/08	TPH	0.21			
Carbon Disulfide	ug/m3	ND	03/18/08	TPH	0.15			
Carbon Tetrachloride	ug/m3	0.46	03/18/08	TPH	0.28			
Chlorobenzene	ug/m3	ND	03/18/08	TPH	0.21			
Chlorodibromomethane	ug/m3	ND	03/18/08	TPH	0.39			
Chloroethane	ug/m3	ND	03/18/08	TPH	0.12			
Chloroform	ug/m3	6.6	03/18/08	TPH	0.22			
Chloromethane	ug/m3	0.89	03/18/08	TPH	0.09			
Cyclohexane	ug/m3	1.9	03/18/08	TPH	0.16			
1,2-Dibromoethane	ug/m3	ND	03/18/08	TPH	0.35			
1,2-Dichlorobenzene	ug/m3	ND	03/18/08	TPH	0.27			
1,3-Dichlorobenzene	ug/m3	ND	03/18/08	TPH	0.27			
1,4-Dichlorobenzene	ug/m3	ND	03/18/08	TPH	0.27			
Dichlorodifluoromethane	ug/m3	2.6	03/18/08	TPH	0.23			
1,1-Dichloroethane	ug/m3	ND	03/18/08	TPH	0.18			
1,2-Dichloroethane	ug/m3	ND	03/18/08	TPH	0.18			
1,1-Dichloroethylene	ug/m3	ND	03/18/08	TPH	0.18			
cis-1,2-Dichloroethylene	ug/m3	ND	03/18/08	TPH	0.18			
t-1,2-Dichloroethylene	ug/m3	ND	03/18/08	TPH	0.18			
1,2-Dichloropropane	ug/m3	ND	03/18/08	TPH	0.21			
cis-1,3-Dichloropropene	ug/m3	ND	03/18/08	TPH	0.20			
trans-1,3-Dichloropropene	ug/m3	ND	03/18/08	TPH	0.20			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/18/08	TPH	0.32			

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ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : OA-08-002
Sample ID : 08B07796
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	5.3	03/18/08	TPH	0.09			
Ethyl Acetate	ug/m3	0.46	03/18/08	TPH	0.17			
Ethylbenzene	ug/m3	0.68	03/18/08	TPH	0.20			
4-Ethyl Toluene	ug/m3	0.27	03/18/08	TPH	0.23			
n-Heptane	ug/m3	0.57	03/18/08	TPH	0.18			
Hexachlorobutadiene	ug/m3	ND	03/18/08	TPH	0.48			
Hexane	ug/m3	3.1	03/18/08	TPH	0.17			
2-Hexanone	ug/m3	0.81	03/18/08	TPH	0.18			
Isopropanol	ug/m3	2.4	03/18/08	TPH	0.11			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/18/08	TPH	0.17			
Methylene Chloride	ug/m3	ND	03/18/08	TPH	0.16			
4-Methyl-2-Pentanone (MIBK)	ug/m3	0.32	03/18/08	TPH	0.18			
Propene	ug/m3	ND	03/18/08	TPH	0.31			
Styrene	ug/m3	ND	03/18/08	TPH	0.19			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/18/08	TPH	0.31			
Tetrachloroethylene	ug/m3	1.0	03/18/08	TPH	0.31			
Tetrahydrofuran	ug/m3	ND	03/18/08	TPH	0.14			
Toluene	ug/m3	6.2	03/18/08	TPH	0.18			
1,2,4-Trichlorobenzene	ug/m3	ND	03/18/08	TPH	0.67			
1,1,1-Trichloroethane	ug/m3	ND	03/18/08	TPH	0.25			
1,1,2-Trichloroethane	ug/m3	ND	03/18/08	TPH	0.25			
Trichloroethylene	ug/m3	ND	03/18/08	TPH	0.25			
Trichlorofluoromethane	ug/m3	1.1	03/18/08	TPH	0.26			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	0.66	03/18/08	TPH	0.35			
1,2,4-Trimethylbenzene	ug/m3	0.58	03/18/08	TPH	0.23			
1,3,5-Trimethylbenzene	ug/m3	ND	03/18/08	TPH	0.23			
Vinyl Acetate	ug/m3	ND	03/18/08	TPH	0.17			
Vinyl Chloride	ug/m3	ND	03/18/08	TPH	0.12			
m/p-Xylene	ug/m3	2.3	03/18/08	TPH	0.39			
o-Xylene	ug/m3	0.69	03/18/08	TPH	0.20			

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MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : OA-08-002

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit
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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-188
Sample ID : 08B07793
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	22	03/16/08	TPH	0.22			
Benzene	ug/m3	0.74	03/16/08	TPH	0.29			
Benzyl Chloride	ug/m3	ND	03/16/08	TPH	0.47			
Bromodichloromethane	ug/m3	ND	03/16/08	TPH	0.60			
Bromoform	ug/m3	ND	03/16/08	TPH	0.92			
Bromomethane	ug/m3	ND	03/16/08	TPH	0.35			
1,3-Butadiene	ug/m3	ND	03/16/08	TPH	0.20			
2-Butanone (MEK)	ug/m3	11	03/16/08	TPH	0.42			
Carbon Disulfide	ug/m3	ND	03/16/08	TPH	0.29			
Carbon Tetrachloride	ug/m3	ND	03/16/08	TPH	0.56			
Chlorobenzene	ug/m3	ND	03/16/08	TPH	0.42			
Chlorodibromomethane	ug/m3	ND	03/16/08	TPH	0.78			
Chloroethane	ug/m3	ND	03/16/08	TPH	0.24			
Chloroform	ug/m3	1.0	03/16/08	TPH	0.44			
Chloromethane	ug/m3	0.29	03/16/08	TPH	0.18			
Cyclohexane	ug/m3	ND	03/16/08	TPH	0.31			
1,2-Dibromoethane	ug/m3	ND	03/16/08	TPH	0.69			
1,2-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.54			
1,3-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.54			
1,4-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.54			
Dichlorodifluoromethane	ug/m3	3.1	03/16/08	TPH	0.45			
1,1-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.36			
1,2-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.36			
1,1-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.36			
cis-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.36			
t-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.36			
1,2-Dichloropropane	ug/m3	ND	03/16/08	TPH	0.42			
cis-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.40			
trans-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.40			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/16/08	TPH	0.63			

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MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-188
Sample ID : 08B07793
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	13	03/16/08	TPH	0.17			
Ethyl Acetate	ug/m3	ND	03/16/08	TPH	0.33			
Ethylbenzene	ug/m3	1.1	03/16/08	TPH	0.40			
4-Ethyl Toluene	ug/m3	1.7	03/16/08	TPH	0.45			
n-Heptane	ug/m3	ND	03/16/08	TPH	0.36			
Hexachlorobutadiene	ug/m3	ND	03/16/08	TPH	0.96			
Hexane	ug/m3	0.73	03/16/08	TPH	0.33			
2-Hexanone	ug/m3	ND	03/16/08	TPH	0.36			
Isopropanol	ug/m3	4.8	03/16/08	TPH	0.22			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/16/08	TPH	0.33			
Methylene Chloride	ug/m3	ND	03/16/08	TPH	0.31			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/16/08	TPH	0.36			
Propene	ug/m3	ND	03/16/08	TPH	0.62			
Styrene	ug/m3	ND	03/16/08	TPH	0.38			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/16/08	TPH	0.62			
Tetrachloroethylene	ug/m3	ND	03/16/08	TPH	0.62			
Tetrahydrofuran	ug/m3	ND	03/16/08	TPH	0.27			
Toluene	ug/m3	7.7	03/16/08	TPH	0.35			
1,2,4-Trichlorobenzene	ug/m3	ND	03/16/08	TPH	1.4			
1,1,1-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.49			
1,1,2-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.49			
Trichloroethylene	ug/m3	ND	03/16/08	TPH	0.49			
Trichlorofluoromethane	ug/m3	8.6	03/16/08	TPH	0.51			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/16/08	TPH	0.69			
1,2,4-Trimethylbenzene	ug/m3	4.4	03/16/08	TPH	0.45			
1,3,5-Trimethylbenzene	ug/m3	0.86	03/16/08	TPH	0.45			
Vinyl Acetate	ug/m3	ND	03/16/08	TPH	0.33			
Vinyl Chloride	ug/m3	ND	03/16/08	TPH	0.24			
m/p-Xylene	ug/m3	4.0	03/16/08	TPH	0.78			
o-Xylene	ug/m3	0.82	03/16/08	TPH	0.40			

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MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-188

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-189
Sample ID : 08B07785
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	12000	03/15/08	TPH	240			
Benzene	ug/m3	3800	03/15/08	TPH	320			
Benzyl Chloride	ug/m3	ND	03/15/08	TPH	520			
Bromodichloromethane	ug/m3	ND	03/15/08	TPH	660			
Bromoform	ug/m3	ND	03/15/08	TPH	1100			
Bromomethane	ug/m3	ND	03/15/08	TPH	380			
1,3-Butadiene	ug/m3	ND	03/15/08	TPH	220			
2-Butanone (MEK)	ug/m3	920	03/15/08	TPH	460			
Carbon Disulfide	ug/m3	5800	03/15/08	TPH	320			
Carbon Tetrachloride	ug/m3	ND	03/15/08	TPH	620			
Chlorobenzene	ug/m3	1500	03/15/08	TPH	460			
Chlorodibromomethane	ug/m3	ND	03/15/08	TPH	860			
Chloroethane	ug/m3	1300	03/15/08	TPH	260			
Chloroform	ug/m3	1700000	03/15/08	TPH	480			
Chloromethane	ug/m3	720	03/15/08	TPH	200			
Cyclohexane	ug/m3	350000	03/15/08	TPH	340			
1,2-Dibromoethane	ug/m3	ND	03/15/08	TPH	760			
1,2-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	600			
1,3-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	600			
1,4-Dichlorobenzene	ug/m3	ND	03/15/08	TPH	600			
Dichlorodifluoromethane	ug/m3	1600	03/15/08	TPH	500			
1,1-Dichloroethane	ug/m3	ND	03/15/08	TPH	400			
1,2-Dichloroethane	ug/m3	ND	03/15/08	TPH	400			
1,1-Dichloroethylene	ug/m3	ND	03/15/08	TPH	400			
cis-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	400			
t-1,2-Dichloroethylene	ug/m3	ND	03/15/08	TPH	400			
1,2-Dichloropropane	ug/m3	ND	03/15/08	TPH	460			
cis-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	440			
trans-1,3-Dichloropropene	ug/m3	ND	03/15/08	TPH	440			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/15/08	TPH	700			

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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-189
Sample ID : 08B07785
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	12000	03/15/08	TPH	180			
Ethyl Acetate	ug/m3	ND	03/15/08	TPH	360			
Ethylbenzene	ug/m3	1300	03/15/08	TPH	440			
4-Ethyl Toluene	ug/m3	520	03/15/08	TPH	500			
n-Heptane	ug/m3	4000	03/15/08	TPH	400			
Hexachlorobutadiene	ug/m3	ND	03/15/08	TPH	1100			
Hexane	ug/m3	83000	03/15/08	TPH	360			
2-Hexanone	ug/m3	ND	03/15/08	TPH	400			
Isopropanol	ug/m3	240000	03/15/08	TPH	240			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/15/08	TPH	360			
Methylene Chloride	ug/m3	38000	03/15/08	TPH	340			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/15/08	TPH	400			
Propene	ug/m3	5600	03/15/08	TPH	180			
Styrene	ug/m3	2600	03/15/08	TPH	420			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/15/08	TPH	680			
Tetrachloroethylene	ug/m3	57000	03/15/08	TPH	680			
Tetrahydrofuran	ug/m3	ND	03/15/08	TPH	300			
Toluene	ug/m3	64000	03/15/08	TPH	380			
1,2,4-Trichlorobenzene	ug/m3	ND	03/15/08	TPH	1500			
1,1,1-Trichloroethane	ug/m3	ND	03/15/08	TPH	540			
1,1,2-Trichloroethane	ug/m3	ND	03/15/08	TPH	540			
Trichloroethylene	ug/m3	10000	03/15/08	TPH	540			
Trichlorofluoromethane	ug/m3	1900	03/15/08	TPH	560			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/15/08	TPH	760			
1,2,4-Trimethylbenzene	ug/m3	2000	03/15/08	TPH	500			
1,3,5-Trimethylbenzene	ug/m3	590	03/15/08	TPH	500			
Vinyl Acetate	ug/m3	ND	03/15/08	TPH	360			
Vinyl Chloride	ug/m3	3500	03/15/08	TPH	260			
m/p-Xylene	ug/m3	3200	03/15/08	TPH	860			
o-Xylene	ug/m3	1000	03/15/08	TPH	440			

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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-189

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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PORTLAND, ME 04101

3/21/2008

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-190
Sample ID : 08B07787
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	93	03/16/08	TPH	9.6			
Benzene	ug/m3	160	03/16/08	TPH	13			
Benzyl Chloride	ug/m3	ND	03/16/08	TPH	21			
Bromodichloromethane	ug/m3	ND	03/16/08	TPH	27			
Bromoform	ug/m3	ND	03/16/08	TPH	41			
Bromomethane	ug/m3	ND	03/16/08	TPH	16			
1,3-Butadiene	ug/m3	ND	03/16/08	TPH	8.8			
2-Butanone (MEK)	ug/m3	120	03/16/08	TPH	19			
Carbon Disulfide	ug/m3	84	03/16/08	TPH	13			
Carbon Tetrachloride	ug/m3	380	03/16/08	TPH	25			
Chlorobenzene	ug/m3	4700	03/16/08	TPH	19			
Chlorodibromomethane	ug/m3	ND	03/16/08	TPH	35			
Chloroethane	ug/m3	ND	03/16/08	TPH	11			
Chloroform	ug/m3	7600	03/16/08	TPH	20			
Chloromethane	ug/m3	ND	03/16/08	TPH	8.0			
Cyclohexane	ug/m3	110	03/16/08	TPH	14			
1,2-Dibromoethane	ug/m3	ND	03/16/08	TPH	31			
1,2-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	24			
1,3-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	24			
1,4-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	24			
Dichlorodifluoromethane	ug/m3	ND	03/16/08	TPH	20			
1,1-Dichloroethane	ug/m3	ND	03/16/08	TPH	16			
1,2-Dichloroethane	ug/m3	ND	03/16/08	TPH	16			
1,1-Dichloroethylene	ug/m3	170	03/16/08	TPH	16			
cis-1,2-Dichloroethylene	ug/m3	18	03/16/08	TPH	16			
t-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	16			
1,2-Dichloropropane	ug/m3	ND	03/16/08	TPH	19			
cis-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	18			
trans-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	18			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/16/08	TPH	28			

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ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-190
Sample ID : 08B07787
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	16	03/16/08	TPH	7.2			
Ethyl Acetate	ug/m3	ND	03/16/08	TPH	15			
Ethylbenzene	ug/m3	24	03/16/08	TPH	18			
4-Ethyl Toluene	ug/m3	ND	03/16/08	TPH	20			
n-Heptane	ug/m3	ND	03/16/08	TPH	16			
Hexachlorobutadiene	ug/m3	ND	03/16/08	TPH	43			
Hexane	ug/m3	36	03/16/08	TPH	15			
2-Hexanone	ug/m3	ND	03/16/08	TPH	16			
Isopropanol	ug/m3	18	03/16/08	TPH	9.6			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/16/08	TPH	15			
Methylene Chloride	ug/m3	ND	03/16/08	TPH	14			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/16/08	TPH	16			
Propene	ug/m3	45	03/16/08	TPH	7.2			
Styrene	ug/m3	53	03/16/08	TPH	17			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/16/08	TPH	28			
Tetrachloroethylene	ug/m3	11000	03/16/08	TPH	28			
Tetrahydrofuran	ug/m3	ND	03/16/08	TPH	12			
Toluene	ug/m3	390	03/16/08	TPH	16			
1,2,4-Trichlorobenzene	ug/m3	ND	03/16/08	TPH	60			
1,1,1-Trichloroethane	ug/m3	ND	03/16/08	TPH	22			
1,1,2-Trichloroethane	ug/m3	ND	03/16/08	TPH	22			
Trichloroethylene	ug/m3	130	03/16/08	TPH	22			
Trichlorofluoromethane	ug/m3	ND	03/16/08	TPH	23			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/16/08	TPH	31			
1,2,4-Trimethylbenzene	ug/m3	ND	03/16/08	TPH	20			
1,3,5-Trimethylbenzene	ug/m3	ND	03/16/08	TPH	20			
Vinyl Acetate	ug/m3	ND	03/16/08	TPH	15			
Vinyl Chloride	ug/m3	76	03/16/08	TPH	11			
m/p-Xylene	ug/m3	66	03/16/08	TPH	35			
o-Xylene	ug/m3	22	03/16/08	TPH	18			

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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-190

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

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Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-191
Sample ID : 08B07789
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	56	03/16/08	TPH	9.6			
Benzene	ug/m3	ND	03/16/08	TPH	13			
Benzyl Chloride	ug/m3	ND	03/16/08	TPH	21			
Bromodichloromethane	ug/m3	81	03/16/08	TPH	27			
Bromoform	ug/m3	ND	03/16/08	TPH	41			
Bromomethane	ug/m3	ND	03/16/08	TPH	16			
1,3-Butadiene	ug/m3	ND	03/16/08	TPH	8.8			
2-Butanone (MEK)	ug/m3	ND	03/16/08	TPH	19			
Carbon Disulfide	ug/m3	ND	03/16/08	TPH	13			
Carbon Tetrachloride	ug/m3	110	03/16/08	TPH	25			
Chlorobenzene	ug/m3	ND	03/16/08	TPH	19			
Chlorodibromomethane	ug/m3	ND	03/16/08	TPH	35			
Chloroethane	ug/m3	ND	03/16/08	TPH	11			
Chloroform	ug/m3	25000	03/16/08	TPH	20			
Chloromethane	ug/m3	ND	03/16/08	TPH	8.0			
Cyclohexane	ug/m3	ND	03/16/08	TPH	14			
1,2-Dibromoethane	ug/m3	ND	03/16/08	TPH	31			
1,2-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	24			
1,3-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	24			
1,4-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	24			
Dichlorodifluoromethane	ug/m3	ND	03/16/08	TPH	20			
1,1-Dichloroethane	ug/m3	ND	03/16/08	TPH	16			
1,2-Dichloroethane	ug/m3	ND	03/16/08	TPH	16			
1,1-Dichloroethylene	ug/m3	ND	03/16/08	TPH	16			
cis-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	16			
t-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	16			
1,2-Dichloropropane	ug/m3	ND	03/16/08	TPH	19			
cis-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	18			
trans-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	18			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/16/08	TPH	28			

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3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-191
Sample ID : 08B07789
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Ethanol	ug/m3	31	03/16/08	TPH	7.2			
Ethyl Acetate	ug/m3	ND	03/16/08	TPH	15			
Ethylbenzene	ug/m3	ND	03/16/08	TPH	18			
4-Ethyl Toluene	ug/m3	ND	03/16/08	TPH	20			
n-Heptane	ug/m3	ND	03/16/08	TPH	16			
Hexachlorobutadiene	ug/m3	ND	03/16/08	TPH	43			
Hexane	ug/m3	ND	03/16/08	TPH	15			
2-Hexanone	ug/m3	ND	03/16/08	TPH	16			
Isopropanol	ug/m3	ND	03/16/08	TPH	9.6			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/16/08	TPH	15			
Methylene Chloride	ug/m3	ND	03/16/08	TPH	14			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/16/08	TPH	16			
Propene	ug/m3	ND	03/16/08	TPH	28			
Styrene	ug/m3	ND	03/16/08	TPH	17			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/16/08	TPH	28			
Tetrachloroethylene	ug/m3	120	03/16/08	TPH	28			
Tetrahydrofuran	ug/m3	ND	03/16/08	TPH	12			
Toluene	ug/m3	ND	03/16/08	TPH	16			
1,2,4-Trichlorobenzene	ug/m3	ND	03/16/08	TPH	60			
1,1,1-Trichloroethane	ug/m3	ND	03/16/08	TPH	22			
1,1,2-Trichloroethane	ug/m3	ND	03/16/08	TPH	22			
Trichloroethylene	ug/m3	110	03/16/08	TPH	22			
Trichlorofluoromethane	ug/m3	ND	03/16/08	TPH	23			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/16/08	TPH	31			
1,2,4-Trimethylbenzene	ug/m3	ND	03/16/08	TPH	20			
1,3,5-Trimethylbenzene	ug/m3	ND	03/16/08	TPH	20			
Vinyl Acetate	ug/m3	ND	03/16/08	TPH	15			
Vinyl Chloride	ug/m3	ND	03/16/08	TPH	11			
m/p-Xylene	ug/m3	ND	03/16/08	TPH	35			
o-Xylene	ug/m3	ND	03/16/08	TPH	18			

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Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-191

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-192
Sample ID : 08B07791
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	24	03/16/08	TPH	0.22			
Benzene	ug/m3	0.52	03/16/08	TPH	0.29			
Benzyl Chloride	ug/m3	ND	03/16/08	TPH	0.47			
Bromodichloromethane	ug/m3	ND	03/16/08	TPH	0.60			
Bromoform	ug/m3	ND	03/16/08	TPH	0.92			
Bromomethane	ug/m3	ND	03/16/08	TPH	0.35			
1,3-Butadiene	ug/m3	ND	03/16/08	TPH	0.20			
2-Butanone (MEK)	ug/m3	2.1	03/16/08	TPH	0.42			
Carbon Disulfide	ug/m3	ND	03/16/08	TPH	0.29			
Carbon Tetrachloride	ug/m3	0.88	03/16/08	TPH	0.56			
Chlorobenzene	ug/m3	ND	03/16/08	TPH	0.42			
Chlorodibromomethane	ug/m3	ND	03/16/08	TPH	0.78			
Chloroethane	ug/m3	ND	03/16/08	TPH	0.24			
Chloroform	ug/m3	1.5	03/16/08	TPH	0.44			
Chloromethane	ug/m3	ND	03/16/08	TPH	0.18			
Cyclohexane	ug/m3	ND	03/16/08	TPH	0.31			
1,2-Dibromoethane	ug/m3	ND	03/16/08	TPH	0.69			
1,2-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.54			
1,3-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.54			
1,4-Dichlorobenzene	ug/m3	ND	03/16/08	TPH	0.54			
Dichlorodifluoromethane	ug/m3	2.5	03/16/08	TPH	0.45			
1,1-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.36			
1,2-Dichloroethane	ug/m3	ND	03/16/08	TPH	0.36			
1,1-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.36			
cis-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.36			
t-1,2-Dichloroethylene	ug/m3	ND	03/16/08	TPH	0.36			
1,2-Dichloropropane	ug/m3	ND	03/16/08	TPH	0.42			
cis-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.40			
trans-1,3-Dichloropropene	ug/m3	ND	03/16/08	TPH	0.40			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/16/08	TPH	0.63			

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Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-192
Sample ID : 08B07791
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	6.3	03/16/08	TPH	0.17			
Ethyl Acetate	ug/m3	ND	03/16/08	TPH	0.33			
Ethylbenzene	ug/m3	0.83	03/16/08	TPH	0.40			
4-Ethyl Toluene	ug/m3	ND	03/16/08	TPH	0.45			
n-Heptane	ug/m3	ND	03/16/08	TPH	0.36			
Hexachlorobutadiene	ug/m3	ND	03/16/08	TPH	0.96			
Hexane	ug/m3	1.2	03/16/08	TPH	0.33			
2-Hexanone	ug/m3	ND	03/16/08	TPH	0.36			
Isopropanol	ug/m3	2.0	03/16/08	TPH	0.22			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/16/08	TPH	0.33			
Methylene Chloride	ug/m3	0.88	03/16/08	TPH	0.31			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	03/16/08	TPH	0.36			
Propene	ug/m3	ND	03/16/08	TPH	0.62			
Styrene	ug/m3	ND	03/16/08	TPH	0.38			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/16/08	TPH	0.62			
Tetrachloroethylene	ug/m3	7.1	03/16/08	TPH	0.62			
Tetrahydrofuran	ug/m3	ND	03/16/08	TPH	0.27			
Toluene	ug/m3	6.4	03/16/08	TPH	0.35			
1,2,4-Trichlorobenzene	ug/m3	ND	03/16/08	TPH	1.4			
1,1,1-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.49			
1,1,2-Trichloroethane	ug/m3	ND	03/16/08	TPH	0.49			
Trichloroethylene	ug/m3	ND	03/16/08	TPH	0.49			
Trichlorofluoromethane	ug/m3	1.7	03/16/08	TPH	0.51			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/16/08	TPH	0.69			
1,2,4-Trimethylbenzene	ug/m3	0.97	03/16/08	TPH	0.45			
1,3,5-Trimethylbenzene	ug/m3	ND	03/16/08	TPH	0.45			
Vinyl Acetate	ug/m3	ND	03/16/08	TPH	0.33			
Vinyl Chloride	ug/m3	ND	03/16/08	TPH	0.24			
m/p-Xylene	ug/m3	3.0	03/16/08	TPH	0.78			
o-Xylene	ug/m3	0.55	03/16/08	TPH	0.40			

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3/21/2008

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LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

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Date Received: 3/5/2008
Field Sample # : SG-08-192

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-193
Sample ID : 08B07795
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	65	03/17/08	TPH	0.22			
Benzene	ug/m3	1.1	03/17/08	TPH	0.29			
Benzyl Chloride	ug/m3	ND	03/17/08	TPH	0.47			
Bromodichloromethane	ug/m3	ND	03/17/08	TPH	0.60			
Bromoform	ug/m3	ND	03/17/08	TPH	0.92			
Bromomethane	ug/m3	ND	03/17/08	TPH	0.35			
1,3-Butadiene	ug/m3	ND	03/17/08	TPH	0.20			
2-Butanone (MEK)	ug/m3	6.6	03/17/08	TPH	0.42			
Carbon Disulfide	ug/m3	ND	03/17/08	TPH	0.29			
Carbon Tetrachloride	ug/m3	0.67	03/17/08	TPH	0.56			
Chlorobenzene	ug/m3	ND	03/17/08	TPH	0.42			
Chlorodibromomethane	ug/m3	ND	03/17/08	TPH	0.78			
Chloroethane	ug/m3	ND	03/17/08	TPH	0.24			
Chloroform	ug/m3	0.88	03/17/08	TPH	0.44			
Chloromethane	ug/m3	ND	03/17/08	TPH	0.18			
Cyclohexane	ug/m3	ND	03/17/08	TPH	0.31			
1,2-Dibromoethane	ug/m3	ND	03/17/08	TPH	0.69			
1,2-Dichlorobenzene	ug/m3	ND	03/17/08	TPH	0.54			
1,3-Dichlorobenzene	ug/m3	ND	03/17/08	TPH	0.54			
1,4-Dichlorobenzene	ug/m3	ND	03/17/08	TPH	0.54			
Dichlorodifluoromethane	ug/m3	2.3	03/17/08	TPH	0.45			
1,1-Dichloroethane	ug/m3	ND	03/17/08	TPH	0.36			
1,2-Dichloroethane	ug/m3	ND	03/17/08	TPH	0.36			
1,1-Dichloroethylene	ug/m3	ND	03/17/08	TPH	0.36			
cis-1,2-Dichloroethylene	ug/m3	ND	03/17/08	TPH	0.36			
t-1,2-Dichloroethylene	ug/m3	ND	03/17/08	TPH	0.36			
1,2-Dichloropropane	ug/m3	ND	03/17/08	TPH	0.42			
cis-1,3-Dichloropropene	ug/m3	ND	03/17/08	TPH	0.40			
trans-1,3-Dichloropropene	ug/m3	ND	03/17/08	TPH	0.40			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	03/17/08	TPH	0.63			

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Purchase Order No.:

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-193
Sample ID : 08B07795
Sampled : 3/4/2008
NOT SPECIFIED
Sample Matrix: AIR
Sample Medium : SUMMA

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	56	03/17/08	TPH	0.17			
Ethyl Acetate	ug/m3	7.7	03/17/08	TPH	0.33			
Ethylbenzene	ug/m3	1.7	03/17/08	TPH	0.40			
4-Ethyl Toluene	ug/m3	6.4	03/17/08	TPH	0.45			
n-Heptane	ug/m3	0.60	03/17/08	TPH	0.36			
Hexachlorobutadiene	ug/m3	ND	03/17/08	TPH	0.96			
Hexane	ug/m3	ND	03/17/08	TPH	0.33			
2-Hexanone	ug/m3	ND	03/17/08	TPH	0.36			
Isopropanol	ug/m3	38	03/17/08	TPH	0.22			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	03/17/08	TPH	0.33			
Methylene Chloride	ug/m3	ND	03/17/08	TPH	0.31			
4-Methyl-2-Pentanone (MIBK)	ug/m3	2.9	03/17/08	TPH	0.36			
Propene	ug/m3	ND	03/17/08	TPH	0.62			
Styrene	ug/m3	ND	03/17/08	TPH	0.38			
1,1,2,2-Tetrachloroethane	ug/m3	ND	03/17/08	TPH	0.62			
Tetrachloroethylene	ug/m3	ND	03/17/08	TPH	0.62			
Tetrahydrofuran	ug/m3	ND	03/17/08	TPH	0.27			
Toluene	ug/m3	9.2	03/17/08	TPH	0.35			
1,2,4-Trichlorobenzene	ug/m3	ND	03/17/08	TPH	1.4			
1,1,1-Trichloroethane	ug/m3	ND	03/17/08	TPH	0.49			
1,1,2-Trichloroethane	ug/m3	ND	03/17/08	TPH	0.49			
Trichloroethylene	ug/m3	ND	03/17/08	TPH	0.49			
Trichlorofluoromethane	ug/m3	1.0	03/17/08	TPH	0.51			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	03/17/08	TPH	0.69			
1,2,4-Trimethylbenzene	ug/m3	8.5	03/17/08	TPH	0.45			
1,3,5-Trimethylbenzene	ug/m3	6.2	03/17/08	TPH	0.45			
Vinyl Acetate	ug/m3	ND	03/17/08	TPH	0.33			
Vinyl Chloride	ug/m3	ND	03/17/08	TPH	0.24			
m/p-Xylene	ug/m3	5.1	03/17/08	TPH	0.78			
o-Xylene	ug/m3	1.4	03/17/08	TPH	0.40			

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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JEFF BRANDON
MACTEC, INC. - ME
511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
Field Sample # : SG-08-193

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

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JEFF BRANDON
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511 CONGRESS STREET
PORTLAND, ME 04101

Purchase Order No.:

3/21/2008

Project Number: 3616036009.01
LIMS-BAT #: LIMT-14062
Job Number: 3616036009.01

Project Location: ARCH-ROCHESTER-NY
Date Received: 3/5/2008
The following notes were attached to the reported analysis :

Sample ID: * 08B07786
Analysis: Isopropanol

REPORTED RESULT IS ESTIMATED. VALUE REPORTED OVER VERIFIED CALIBRATION RANGE.

** END OF REPORT **

RL = Reporting Limit
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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14008

Sample Id	Analysis	QC Analysis	Values	Units	Limits
08B07785					
	4-Bromofluorobenzene	Surrogate Recovery	88.75	%	70-130
08B07795					
	4-Bromofluorobenzene	Surrogate Recovery	96.87	%	70-130
08B07796					
	4-Bromofluorobenzene	Surrogate Recovery	89.50	%	70-130
BLANK-114879					
	Acetone	Blank	0.42	ug/m3	
	Benzene	Blank	<0.08	ug/m3	
	Carbon Tetrachloride	Blank	<0.16	ug/m3	
	Chloroform	Blank	<0.12	ug/m3	
	1,2-Dichloroethane	Blank	<0.10	ug/m3	
	1,4-Dichlorobenzene	Blank	<0.15	ug/m3	
	Ethyl Acetate	Blank	<0.09	ug/m3	
	Ethylbenzene	Blank	<0.11	ug/m3	
	Hexane	Blank	<0.09	ug/m3	
	Isopropanol	Blank	<0.06	ug/m3	
	2-Butanone (MEK)	Blank	<0.12	ug/m3	
	4-Methyl-2-Pentanone (MIBK)	Blank	<0.10	ug/m3	
	Styrene	Blank	<0.11	ug/m3	
	Tetrachloroethylene	Blank	<0.17	ug/m3	
	Toluene	Blank	<0.10	ug/m3	
	1,1,1-Trichloroethane	Blank	<0.14	ug/m3	
	Trichloroethylene	Blank	<0.14	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<0.19	ug/m3	
	Trichlorofluoromethane	Blank	<0.14	ug/m3	
	o-Xylene	Blank	<0.11	ug/m3	
	m/p-Xylene	Blank	<0.22	ug/m3	
	1,2-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,3-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,1-Dichloroethane	Blank	<0.10	ug/m3	
	1,1-Dichloroethylene	Blank	<0.10	ug/m3	
	Ethanol	Blank	0.14	ug/m3	
	4-Ethyl Toluene	Blank	<0.13	ug/m3	
	Methyl tert-Butyl Ether (MTBE)	Blank	<0.09	ug/m3	
	t-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	Vinyl Chloride	Blank	<0.07	ug/m3	
	Methylene Chloride	Blank	<0.09	ug/m3	
	Chlorobenzene	Blank	<0.12	ug/m3	
	Chloromethane	Blank	<0.05	ug/m3	
	Bromomethane	Blank	<0.10	ug/m3	
	Chloroethane	Blank	<0.07	ug/m3	
	cis-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	trans-1,3-Dichloropropene	Blank	<0.11	ug/m3	

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

QC Batch Number: BATCH-14008

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-114879					
	Chlorodibromomethane	Blank	<0.22	ug/m3	
	1,1,2-Trichloroethane	Blank	<0.14	ug/m3	
	Bromoform	Blank	<0.26	ug/m3	
	1,1,2,2-Tetrachloroethane	Blank	<0.17	ug/m3	
	Hexachlorobutadiene	Blank	<0.27	ug/m3	
	1,2,4-Trichlorobenzene	Blank	<0.38	ug/m3	
	1,2,4-Trimethylbenzene	Blank	<0.13	ug/m3	
	1,3,5-Trimethylbenzene	Blank	<0.13	ug/m3	
	Cyclohexane	Blank	<0.09	ug/m3	
	cis-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	1,2-Dichloropropane	Blank	<0.12	ug/m3	
	Dichlorodifluoromethane	Blank	<0.13	ug/m3	
	Benzyl Chloride	Blank	<0.13	ug/m3	
	Carbon Disulfide	Blank	<0.08	ug/m3	
	Vinyl Acetate	Blank	<0.09	ug/m3	
	2-Hexanone	Blank	<0.10	ug/m3	
	Bromodichloromethane	Blank	<0.17	ug/m3	
	1,2-Dibromoethane	Blank	<0.19	ug/m3	
	n-Heptane	Blank	<0.10	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Blank	<0.18	ug/m3	
	Tetrahydrofuran	Blank	<0.08	ug/m3	
	Propene	Blank	0.17	ug/m3	
	1,3-Butadiene	Blank	<0.06	ug/m3	
BLANK-114880					
	Acetone	Blank	1.19	ug/m3	
	Benzene	Blank	<0.08	ug/m3	
	Carbon Tetrachloride	Blank	<0.16	ug/m3	
	Chloroform	Blank	<0.12	ug/m3	
	1,2-Dichloroethane	Blank	<0.10	ug/m3	
	1,4-Dichlorobenzene	Blank	<0.15	ug/m3	
	Ethyl Acetate	Blank	<0.09	ug/m3	
	Ethylbenzene	Blank	<0.11	ug/m3	
	Hexane	Blank	<0.09	ug/m3	
	Isopropanol	Blank	0.11	ug/m3	
	2-Butanone (MEK)	Blank	0.26	ug/m3	
	4-Methyl-2-Pentanone (MIBK)	Blank	<0.10	ug/m3	
	Styrene	Blank	<0.11	ug/m3	
	Tetrachloroethylene	Blank	<0.17	ug/m3	
	Toluene	Blank	<0.10	ug/m3	
	1,1,1-Trichloroethane	Blank	<0.14	ug/m3	
	Trichloroethylene	Blank	<0.14	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<0.19	ug/m3	
	Trichlorofluoromethane	Blank	<0.14	ug/m3	

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Méthod Blanks

QC Batch Number: BATCH-14008

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-114880					
	o-Xylene	Blank	<0.11	ug/m3	
	m/p-Xylene	Blank	<0.22	ug/m3	
	1,2-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,3-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,1-Dichloroethane	Blank	<0.10	ug/m3	
	1,1-Dichloroethylene	Blank	<0.10	ug/m3	
	Ethanol	Blank	<0.10	ug/m3	
	4-Ethyl Toluene	Blank	<0.13	ug/m3	
	Methyl tert-Butyl Ether (MTBE)	Blank	<0.09	ug/m3	
	t-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	Vinyl Chloride	Blank	<0.07	ug/m3	
	Methylene Chloride	Blank	<0.09	ug/m3	
	Chlorobenzene	Blank	<0.12	ug/m3	
	Chloromethane	Blank	<0.05	ug/m3	
	Bromomethane	Blank	<0.10	ug/m3	
	Chloroethane	Blank	<0.07	ug/m3	
	cis-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	trans-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	Chlorodibromomethane	Blank	<0.22	ug/m3	
	1,1,2-Trichloroethane	Blank	<0.14	ug/m3	
	Bromoform	Blank	<0.26	ug/m3	
	1,1,2,2-Tetrachloroethane	Blank	<0.17	ug/m3	
	Hexachlorobutadiene	Blank	<0.27	ug/m3	
	1,2,4-Trichlorobenzene	Blank	<0.38	ug/m3	
	1,2,4-Trimethylbenzene	Blank	<0.13	ug/m3	
	1,3,5-Trimethylbenzene	Blank	<0.13	ug/m3	
	Cyclohexane	Blank	<0.09	ug/m3	
	cis-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	1,2-Dichloropropane	Blank	<0.12	ug/m3	
	Dichlorodifluoromethane	Blank	<0.13	ug/m3	
	Benzyl Chloride	Blank	<0.13	ug/m3	
	Carbon Disulfide	Blank	<0.08	ug/m3	
	Vinyl Acetate	Blank	<0.09	ug/m3	
	2-Hexanone	Blank	<0.10	ug/m3	
	Bromodichloromethane	Blank	<0.17	ug/m3	
	1,2-Dibromoethane	Blank	<0.19	ug/m3	
	n-Heptane	Blank	<0.10	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Blank	<0.18	ug/m3	
	Tetrahydrofuran	Blank	<0.08	ug/m3	
	Propene	Blank	<0.18	ug/m3	
	1,3-Butadiene	Blank	<0.06	ug/m3	
LFBLANK-76366					
	Acetone	Lab Fort Blank Amt.	11.87	ug/m3	

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QC SUMMARY REPORT

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Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14008

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76366					
	Acetone	Lab Fort Blk. Found	11.79	ug/m3	
		Lab Fort Blk. % Rec.	99.28	%	50-150
	Benzene	Lab Fort Blank Amt.	15.95	ug/m3	
		Lab Fort Blk. Found	13.45	ug/m3	
		Lab Fort Blk. % Rec.	84.37	%	70-130
	Carbon Tetrachloride	Lab Fort Blank Amt.	31.45	ug/m3	
		Lab Fort Blk. Found	29.89	ug/m3	
		Lab Fort Blk. % Rec.	95.06	%	70-130
	Chloroform	Lab Fort Blank Amt.	24.33	ug/m3	
		Lab Fort Blk. Found	23.54	ug/m3	
		Lab Fort Blk. % Rec.	96.73	%	70-130
	1,2-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	20.37	ug/m3	
		Lab Fort Blk. % Rec.	100.66	%	70-130
	1,4-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	28.75	ug/m3	
		Lab Fort Blk. % Rec.	95.64	%	70-130
	Ethyl Acetate	Lab Fort Blank Amt.	18.01	ug/m3	
		Lab Fort Blk. Found	15.80	ug/m3	
		Lab Fort Blk. % Rec.	87.70	%	50-150
	Ethylbenzene	Lab Fort Blank Amt.	21.67	ug/m3	
		Lab Fort Blk. Found	20.64	ug/m3	
		Lab Fort Blk. % Rec.	95.22	%	70-130
	Hexane	Lab Fort Blank Amt.	17.62	ug/m3	
		Lab Fort Blk. Found	15.50	ug/m3	
		Lab Fort Blk. % Rec.	88.00	%	70-130
	Isopropanol	Lab Fort Blank Amt.	12.28	ug/m3	
		Lab Fort Blk. Found	15.67	ug/m3	
		Lab Fort Blk. % Rec.	127.60	%	50-150
	2-Butanone (MEK)	Lab Fort Blank Amt.	14.74	ug/m3	
		Lab Fort Blk. Found	14.05	ug/m3	
		Lab Fort Blk. % Rec.	95.32	%	70-130
	4-Methyl-2-Pentanone (MIBK)	Lab Fort Blank Amt.	20.48	ug/m3	
		Lab Fort Blk. Found	18.13	ug/m3	
		Lab Fort Blk. % Rec.	88.52	%	70-130
	Styrene	Lab Fort Blank Amt.	21.26	ug/m3	
		Lab Fort Blk. Found	21.04	ug/m3	
		Lab Fort Blk. % Rec.	98.94	%	70-130
	Tetrachloroethylene	Lab Fort Blank Amt.	33.90	ug/m3	
		Lab Fort Blk. Found	31.63	ug/m3	
		Lab Fort Blk. % Rec.	93.30	%	70-130
	Toluene	Lab Fort Blank Amt.	18.81	ug/m3	
		Lab Fort Blk. Found	17.36	ug/m3	

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Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14008

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76366					
	Toluene	Lab Fort Blk. % Rec.	92.30	%	70-130
	1,1,1-Trichloroethane	Lab Fort Blank Amt.	27.28	ug/m3	
		Lab Fort Blk. Found	24.54	ug/m3	
		Lab Fort Blk. % Rec.	89.95	%	70-130
	Trichloroethylene	Lab Fort Blank Amt.	26.87	ug/m3	
		Lab Fort Blk. Found	24.03	ug/m3	
		Lab Fort Blk. % Rec.	89.43	%	70-130
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Lab Fort Blank Amt.	38.31	ug/m3	
		Lab Fort Blk. Found	38.05	ug/m3	
		Lab Fort Blk. % Rec.	99.29	%	70-130
	Trichlorofluoromethane	Lab Fort Blank Amt.	28.09	ug/m3	
		Lab Fort Blk. Found	30.51	ug/m3	
		Lab Fort Blk. % Rec.	108.60	%	70-130
	o-Xylene	Lab Fort Blank Amt.	21.71	ug/m3	
		Lab Fort Blk. Found	21.83	ug/m3	
		Lab Fort Blk. % Rec.	100.56	%	70-130
	m/p-Xylene	Lab Fort Blank Amt.	43.43	ug/m3	
		Lab Fort Blk. Found	43.30	ug/m3	
		Lab Fort Blk. % Rec.	99.68	%	70-130
	1,2-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	29.98	ug/m3	
		Lab Fort Blk. % Rec.	99.76	%	70-130
	1,3-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	29.41	ug/m3	
		Lab Fort Blk. % Rec.	97.84	%	70-130
	1,1-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	18.72	ug/m3	
		Lab Fort Blk. % Rec.	92.50	%	70-130
	1,1-Dichloroethylene	Lab Fort Blank Amt.	19.83	ug/m3	
		Lab Fort Blk. Found	19.52	ug/m3	
		Lab Fort Blk. % Rec.	98.42	%	70-130
	Ethanol	Lab Fort Blank Amt.	9.42	ug/m3	
		Lab Fort Blk. Found	7.83	ug/m3	
		Lab Fort Blk. % Rec.	83.16	%	50-150
	4-Ethyl Toluene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	27.18	ug/m3	
		Lab Fort Blk. % Rec.	110.60	%	50-150
	Methyl tert-Butyl Ether (MTBE)	Lab Fort Blank Amt.	18.02	ug/m3	
		Lab Fort Blk. Found	17.78	ug/m3	
		Lab Fort Blk. % Rec.	98.68	%	70-130
	t-1,2-Dichloroethylene	Lab Fort Blank Amt.	19.82	ug/m3	
		Lab Fort Blk. Found	17.94	ug/m3	
		Lab Fort Blk. % Rec.	90.51	%	70-130

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Standard Reference Materials and Duplicates
Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14008

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76366					
	Vinyl Chloride	Lab Fort Blank Amt.	12.78	ug/m3	
		Lab Fort Blk. Found	10.94	ug/m3	
		Lab Fort Blk. % Rec.	85.66	%	70-130
	Methylene Chloride	Lab Fort Blank Amt.	17.36	ug/m3	
		Lab Fort Blk. Found	21.78	ug/m3	
		Lab Fort Blk. % Rec.	125.50	%	70-130
	Chlorobenzene	Lab Fort Blank Amt.	23.02	ug/m3	
		Lab Fort Blk. Found	21.46	ug/m3	
		Lab Fort Blk. % Rec.	93.23	%	70-130
	Chloromethane	Lab Fort Blank Amt.	10.32	ug/m3	
		Lab Fort Blk. Found	8.02	ug/m3	
		Lab Fort Blk. % Rec.	77.70	%	70-130
	Bromomethane	Lab Fort Blank Amt.	19.40	ug/m3	
		Lab Fort Blk. Found	19.23	ug/m3	
		Lab Fort Blk. % Rec.	99.11	%	70-130
	Chloroethane	Lab Fort Blank Amt.	13.19	ug/m3	
		Lab Fort Blk. Found	12.12	ug/m3	
		Lab Fort Blk. % Rec.	91.91	%	70-130
	cis-1,3-Dichloropropene	Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	21.31	ug/m3	
		Lab Fort Blk. % Rec.	93.92	%	70-130
	trans-1,3-Dichloropropene	Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	21.65	ug/m3	
		Lab Fort Blk. % Rec.	95.42	%	70-130
	Chlorodibromomethane	Lab Fort Blank Amt.	42.59	ug/m3	
		Lab Fort Blk. Found	44.01	ug/m3	
		Lab Fort Blk. % Rec.	103.34	%	70-130
	1,1,2-Trichloroethane	Lab Fort Blank Amt.	27.28	ug/m3	
		Lab Fort Blk. Found	23.67	ug/m3	
		Lab Fort Blk. % Rec.	86.78	%	70-130
	Bromoform	Lab Fort Blank Amt.	51.69	ug/m3	
		Lab Fort Blk. Found	57.30	ug/m3	
		Lab Fort Blk. % Rec.	110.84	%	70-130
	1,1,2,2-Tetrachloroethane	Lab Fort Blank Amt.	34.33	ug/m3	
		Lab Fort Blk. Found	31.73	ug/m3	
		Lab Fort Blk. % Rec.	92.42	%	70-130
	Hexachlorobutadiene	Lab Fort Blank Amt.	53.33	ug/m3	
		Lab Fort Blk. Found	45.66	ug/m3	
		Lab Fort Blk. % Rec.	85.61	%	70-130
	1,2,4-Trichlorobenzene	Lab Fort Blank Amt.	37.10	ug/m3	
		Lab Fort Blk. Found	35.40	ug/m3	
		Lab Fort Blk. % Rec.	95.41	%	70-130
	1,2,4-Trimethylbenzene	Lab Fort Blank Amt.	24.58	ug/m3	

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Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76366					
	1,2,4-Trimethylbenzene	Lab Fort Blk. Found	27.32	ug/m3	
		Lab Fort Blk. % Rec.	111.16	%	70-130
	1,3,5-Trimethylbenzene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	26.58	ug/m3	
		Lab Fort Blk. % Rec.	108.16	%	70-130
	Cyclohexane	Lab Fort Blank Amt.	17.21	ug/m3	
		Lab Fort Blk. Found	14.93	ug/m3	
		Lab Fort Blk. % Rec.	86.77	%	50-150
	cis-1,2-Dichloroethylene	Lab Fort Blank Amt.	19.82	ug/m3	
		Lab Fort Blk. Found	18.60	ug/m3	
		Lab Fort Blk. % Rec.	93.86	%	70-130
	1,2-Dichloropropane	Lab Fort Blank Amt.	23.10	ug/m3	
		Lab Fort Blk. Found	18.95	ug/m3	
		Lab Fort Blk. % Rec.	82.03	%	70-130
	Dichlorodifluoromethane	Lab Fort Blank Amt.	24.72	ug/m3	
		Lab Fort Blk. Found	26.44	ug/m3	
		Lab Fort Blk. % Rec.	106.96	%	70-130
	Benzyl Chloride	Lab Fort Blank Amt.	25.88	ug/m3	
		Lab Fort Blk. Found	27.81	ug/m3	
		Lab Fort Blk. % Rec.	107.44	%	70-130
	Carbon Disulfide	Lab Fort Blank Amt.	15.57	ug/m3	
		Lab Fort Blk. Found	15.08	ug/m3	
		Lab Fort Blk. % Rec.	96.87	%	70-130
	Vinyl Acetate	Lab Fort Blank Amt.	17.60	ug/m3	
		Lab Fort Blk. Found	16.27	ug/m3	
		Lab Fort Blk. % Rec.	92.45	%	70-130
	2-Hexanone	Lab Fort Blank Amt.	20.48	ug/m3	
		Lab Fort Blk. Found	18.27	ug/m3	
		Lab Fort Blk. % Rec.	89.23	%	50-150
	Bromodichloromethane	Lab Fort Blank Amt.	33.50	ug/m3	
		Lab Fort Blk. Found	32.33	ug/m3	
		Lab Fort Blk. % Rec.	96.50	%	70-130
	1,2-Dibromoethane	Lab Fort Blank Amt.	38.42	ug/m3	
		Lab Fort Blk. Found	35.09	ug/m3	
		Lab Fort Blk. % Rec.	91.32	%	70-130
	n-Heptane	Lab Fort Blank Amt.	20.49	ug/m3	
		Lab Fort Blk. Found	18.21	ug/m3	
		Lab Fort Blk. % Rec.	88.89	%	50-150
	1,2-Dichlorotetrafluoroethane (114)	Lab Fort Blank Amt.	34.95	ug/m3	
		Lab Fort Blk. Found	34.48	ug/m3	
		Lab Fort Blk. % Rec.	98.66	%	70-130
	Tetrahydrofuran	Lab Fort Blank Amt.	14.74	ug/m3	
		Lab Fort Blk. Found	14.39	ug/m3	

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LFBLANK-76366					
	Tetrahydrofuran	Lab Fort Blk. % Rec.	97.64	%	50-150
	Propene	Lab Fort Blank Amt.	8.60	ug/m3	
		Lab Fort Blk. Found	7.59	ug/m3	
		Lab Fort Blk. % Rec.	88.22	%	50-150
	1,3-Butadiene	Lab Fort Blank Amt.	11.06	ug/m3	
		Lab Fort Blk. Found	9.55	ug/m3	
		Lab Fort Blk. % Rec.	86.42	%	70-130
LFBLANK-76367					
	Acetone	Lab Fort Blank Amt.	11.87	ug/m3	
		Lab Fort Blk. Found	9.48	ug/m3	
		Lab Fort Blk. % Rec.	79.90	%	50-150
	Benzene	Lab Fort Blank Amt.	15.95	ug/m3	
		Lab Fort Blk. Found	11.49	ug/m3	
		Lab Fort Blk. % Rec.	72.07	%	70-130
	Carbon Tetrachloride	Lab Fort Blank Amt.	31.45	ug/m3	
		Lab Fort Blk. Found	26.77	ug/m3	
		Lab Fort Blk. % Rec.	85.14	%	70-130
	Chloroform	Lab Fort Blank Amt.	24.33	ug/m3	
		Lab Fort Blk. Found	22.64	ug/m3	
		Lab Fort Blk. % Rec.	93.03	%	70-130
	1,2-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	18.89	ug/m3	
		Lab Fort Blk. % Rec.	93.32	%	70-130
	1,4-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	24.03	ug/m3	
		Lab Fort Blk. % Rec.	79.94	%	70-130
	Ethyl Acetate	Lab Fort Blank Amt.	18.01	ug/m3	
		Lab Fort Blk. Found	13.84	ug/m3	
		Lab Fort Blk. % Rec.	76.82	%	50-150
	Ethylbenzene	Lab Fort Blank Amt.	21.67	ug/m3	
		Lab Fort Blk. Found	18.08	ug/m3	
		Lab Fort Blk. % Rec.	83.42	%	70-130
	Hexane	Lab Fort Blank Amt.	17.62	ug/m3	
		Lab Fort Blk. Found	13.97	ug/m3	
		Lab Fort Blk. % Rec.	79.28	%	70-130
	Isopropanol	Lab Fort Blank Amt.	12.28	ug/m3	
		Lab Fort Blk. Found	16.18	ug/m3	
		Lab Fort Blk. % Rec.	131.72	%	50-150
	2-Butanone (MEK)	Lab Fort Blank Amt.	14.74	ug/m3	
		Lab Fort Blk. Found	12.48	ug/m3	
		Lab Fort Blk. % Rec.	84.67	%	70-130
	4-Methyl-2-Pentanone (MIBK)	Lab Fort Blank Amt.	20.48	ug/m3	
		Lab Fort Blk. Found	13.91	ug/m3	

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LFBLANK-76367					
	4-Methyl-2-Pentanone (MIBK)	Lab Fort Blk. % Rec.	67.94	%	70-130
	Styrene	Lab Fort Blank Amt.	21.26	ug/m3	
		Lab Fort Blk. Found	17.98	ug/m3	
		Lab Fort Blk. % Rec.	84.56	%	70-130
	Tetrachloroethylene	Lab Fort Blank Amt.	33.90	ug/m3	
		Lab Fort Blk. Found	29.97	ug/m3	
		Lab Fort Blk. % Rec.	88.39	%	70-130
	Toluene	Lab Fort Blank Amt.	18.81	ug/m3	
		Lab Fort Blk. Found	15.21	ug/m3	
		Lab Fort Blk. % Rec.	80.88	%	70-130
	1,1,1-Trichloroethane	Lab Fort Blank Amt.	27.28	ug/m3	
		Lab Fort Blk. Found	21.85	ug/m3	
		Lab Fort Blk. % Rec.	80.10	%	70-130
	Trichloroethylene	Lab Fort Blank Amt.	26.87	ug/m3	
		Lab Fort Blk. Found	20.65	ug/m3	
		Lab Fort Blk. % Rec.	76.85	%	70-130
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Lab Fort Blank Amt.	38.31	ug/m3	
		Lab Fort Blk. Found	37.58	ug/m3	
		Lab Fort Blk. % Rec.	98.07	%	70-130
	Trichlorofluoromethane	Lab Fort Blank Amt.	28.09	ug/m3	
		Lab Fort Blk. Found	22.78	ug/m3	
		Lab Fort Blk. % Rec.	81.09	%	70-130
	o-Xylene	Lab Fort Blank Amt.	21.71	ug/m3	
		Lab Fort Blk. Found	18.64	ug/m3	
		Lab Fort Blk. % Rec.	85.84	%	70-130
	m/p-Xylene	Lab Fort Blank Amt.	43.43	ug/m3	
		Lab Fort Blk. Found	37.26	ug/m3	
		Lab Fort Blk. % Rec.	85.79	%	70-130
	1,2-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	25.34	ug/m3	
		Lab Fort Blk. % Rec.	84.32	%	70-130
	1,3-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	24.51	ug/m3	
		Lab Fort Blk. % Rec.	81.54	%	70-130
	1,1-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	16.81	ug/m3	
		Lab Fort Blk. % Rec.	83.08	%	70-130
	1,1-Dichloroethylene	Lab Fort Blank Amt.	19.83	ug/m3	
		Lab Fort Blk. Found	17.70	ug/m3	
		Lab Fort Blk. % Rec.	89.24	%	70-130
	Ethanol	Lab Fort Blank Amt.	9.42	ug/m3	
		Lab Fort Blk. Found	6.85	ug/m3	
		Lab Fort Blk. % Rec.	72.73	%	50-150

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LFBLANK-76367					
	4-Ethyl Toluene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	22.76	ug/m3	
		Lab Fort Blk. % Rec.	92.62	%	50-150
	Methyl tert-Butyl Ether (MTBE)	Lab Fort Blank Amt.	18.02	ug/m3	
		Lab Fort Blk. Found	17.06	ug/m3	
		Lab Fort Blk. % Rec.	94.67	%	70-130
	t-1,2-Dichloroethylene	Lab Fort Blank Amt.	19.82	ug/m3	
		Lab Fort Blk. Found	16.74	ug/m3	
		Lab Fort Blk. % Rec.	84.48	%	70-130
	Vinyl Chloride	Lab Fort Blank Amt.	12.78	ug/m3	
		Lab Fort Blk. Found	9.22	ug/m3	
		Lab Fort Blk. % Rec.	72.18	%	70-130
	Methylene Chloride	Lab Fort Blank Amt.	17.36	ug/m3	
		Lab Fort Blk. Found	20.93	ug/m3	
		Lab Fort Blk. % Rec.	120.60	%	70-130
	Chlorobenzene	Lab Fort Blank Amt.	23.02	ug/m3	
		Lab Fort Blk. Found	19.54	ug/m3	
		Lab Fort Blk. % Rec.	84.89	%	70-130
	Chloromethane	Lab Fort Blank Amt.	10.32	ug/m3	
		Lab Fort Blk. Found	6.72	ug/m3	
		Lab Fort Blk. % Rec.	65.10	%	70-130
	Bromomethane	Lab Fort Blank Amt.	19.40	ug/m3	
		Lab Fort Blk. Found	15.94	ug/m3	
		Lab Fort Blk. % Rec.	82.14	%	70-130
	Chloroethane	Lab Fort Blank Amt.	13.19	ug/m3	
		Lab Fort Blk. Found	10.33	ug/m3	
		Lab Fort Blk. % Rec.	78.35	%	70-130
	cis-1,3-Dichloropropene	Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	17.02	ug/m3	
		Lab Fort Blk. % Rec.	75.01	%	70-130
	trans-1,3-Dichloropropene	Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	17.16	ug/m3	
		Lab Fort Blk. % Rec.	75.59	%	70-130
	Chlorodibromomethane	Lab Fort Blank Amt.	42.59	ug/m3	
		Lab Fort Blk. Found	41.01	ug/m3	
		Lab Fort Blk. % Rec.	96.28	%	70-130
	1,1,2-Trichloroethane	Lab Fort Blank Amt.	27.28	ug/m3	
		Lab Fort Blk. Found	20.11	ug/m3	
		Lab Fort Blk. % Rec.	73.72	%	70-130
	Bromoform	Lab Fort Blank Amt.	51.69	ug/m3	
		Lab Fort Blk. Found	50.04	ug/m3	
		Lab Fort Blk. % Rec.	96.80	%	70-130
	1,1,2,2-Tetrachloroethane	Lab Fort Blank Amt.	34.33	ug/m3	

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LFBLANK-76367					
	1,1,2,2-Tetrachloroethane	Lab Fort Blk. Found	25.70	ug/m3	
		Lab Fort Blk. % Rec.	74.86	%	70-130
	Hexachlorobutadiene	Lab Fort Blank Amt.	53.33	ug/m3	
		Lab Fort Blk. Found	39.24	ug/m3	
		Lab Fort Blk. % Rec.	73.58	%	70-130
	1,2,4-Trichlorobenzene	Lab Fort Blank Amt.	37.10	ug/m3	
		Lab Fort Blk. Found	29.50	ug/m3	
		Lab Fort Blk. % Rec.	79.52	%	70-130
	1,2,4-Trimethylbenzene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	23.09	ug/m3	
		Lab Fort Blk. % Rec.	93.94	%	70-130
	1,3,5-Trimethylbenzene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	22.26	ug/m3	
		Lab Fort Blk. % Rec.	90.56	%	70-130
	Cyclohexane	Lab Fort Blank Amt.	17.21	ug/m3	
		Lab Fort Blk. Found	13.01	ug/m3	
		Lab Fort Blk. % Rec.	75.61	%	50-150
	cis-1,2-Dichloroethylene	Lab Fort Blank Amt.	19.82	ug/m3	
		Lab Fort Blk. Found	17.40	ug/m3	
		Lab Fort Blk. % Rec.	87.79	%	70-130
	1,2-Dichloropropane	Lab Fort Blank Amt.	23.10	ug/m3	
		Lab Fort Blk. Found	14.64	ug/m3	
		Lab Fort Blk. % Rec.	63.36	%	70-130
	Dichlorodifluoromethane	Lab Fort Blank Amt.	24.72	ug/m3	
		Lab Fort Blk. Found	23.90	ug/m3	
		Lab Fort Blk. % Rec.	96.67	%	70-130
	Benzyl Chloride	Lab Fort Blank Amt.	25.88	ug/m3	
		Lab Fort Blk. Found	21.96	ug/m3	
		Lab Fort Blk. % Rec.	84.86	%	70-130
	Carbon Disulfide	Lab Fort Blank Amt.	15.57	ug/m3	
		Lab Fort Blk. Found	13.95	ug/m3	
		Lab Fort Blk. % Rec.	89.60	%	70-130
	Vinyl Acetate	Lab Fort Blank Amt.	17.60	ug/m3	
		Lab Fort Blk. Found	14.66	ug/m3	
		Lab Fort Blk. % Rec.	83.32	%	70-130
	2-Hexanone	Lab Fort Blank Amt.	20.48	ug/m3	
		Lab Fort Blk. Found	15.00	ug/m3	
		Lab Fort Blk. % Rec.	73.23	%	50-150
	Bromodichloromethane	Lab Fort Blank Amt.	33.50	ug/m3	
		Lab Fort Blk. Found	26.56	ug/m3	
		Lab Fort Blk. % Rec.	79.28	%	70-130
	1,2-Dibromoethane	Lab Fort Blank Amt.	38.42	ug/m3	
		Lab Fort Blk. Found	30.95	ug/m3	

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LFBLANK-76367					
	1,2-Dibromoethane	Lab Fort Blk. % Rec.	80.56	%	70-130
	n-Heptane	Lab Fort Blank Amt.	20.49	ug/m3	
		Lab Fort Blk. Found	14.83	ug/m3	
		Lab Fort Blk. % Rec.	72.40	%	50-150
	1,2-Dichlorotetrafluoroethane (114)	Lab Fort Blank Amt.	34.95	ug/m3	
		Lab Fort Blk. Found	27.60	ug/m3	
		Lab Fort Blk. % Rec.	78.97	%	70-130
	Tetrahydrofuran	Lab Fort Blank Amt.	14.74	ug/m3	
		Lab Fort Blk. Found	12.71	ug/m3	
		Lab Fort Blk. % Rec.	86.24	%	50-150
	Propene	Lab Fort Blank Amt.	8.60	ug/m3	
		Lab Fort Blk. Found	6.50	ug/m3	
		Lab Fort Blk. % Rec.	75.54	%	50-150
	1,3-Butadiene	Lab Fort Blank Amt.	11.06	ug/m3	
		Lab Fort Blk. Found	7.53	ug/m3	
		Lab Fort Blk. % Rec.	68.16	%	70-130

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Sample Id	Analysis	QC Analysis	Values	Units	Limits
08B07783					
	4-Bromofluorobenzene	Surrogate Recovery	92.62	%	70-130
08B07784					
	4-Bromofluorobenzene	Surrogate Recovery	94.50	%	70-130
08B07786					
	4-Bromofluorobenzene	Surrogate Recovery	92.50	%	70-130
08B07787					
	4-Bromofluorobenzene	Surrogate Recovery	88.12	%	70-130
08B07788					
	4-Bromofluorobenzene	Surrogate Recovery	88.00	%	70-130
08B07789					
	4-Bromofluorobenzene	Surrogate Recovery	80.87	%	70-130
08B07790					
	4-Bromofluorobenzene	Surrogate Recovery	88.87	%	70-130
08B07791					
	4-Bromofluorobenzene	Surrogate Recovery	86.37	%	70-130
08B07792					
	4-Bromofluorobenzene	Surrogate Recovery	83.75	%	70-130
08B07793					
	4-Bromofluorobenzene	Surrogate Recovery	84.00	%	70-130
08B07794					
	4-Bromofluorobenzene	Surrogate Recovery	98.37	%	70-130
BLANK-114883					
	Acetone	Blank	0.35	ug/m3	
	Benzene	Blank	<0.08	ug/m3	
	Carbon Tetrachloride	Blank	<0.16	ug/m3	
	Chloroform	Blank	<0.12	ug/m3	
	1,2-Dichloroethane	Blank	<0.10	ug/m3	
	1,4-Dichlorobenzene	Blank	<0.15	ug/m3	
	Ethyl Acetate	Blank	<0.09	ug/m3	
	Ethylbenzene	Blank	<0.11	ug/m3	
	Hexane	Blank	<0.09	ug/m3	
	Isopropanol	Blank	<0.06	ug/m3	
	2-Butanone (MEK)	Blank	<0.12	ug/m3	
	4-Methyl-2-Pentanone (MIBK)	Blank	<0.10	ug/m3	
	Styrene	Blank	<0.11	ug/m3	
	Tetrachloroethylene	Blank	<0.17	ug/m3	
	Toluene	Blank	<0.10	ug/m3	
	1,1,1-Trichloroethane	Blank	<0.14	ug/m3	
	Trichloroethylene	Blank	<0.14	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<0.19	ug/m3	
	Trichlorofluoromethane	Blank	<0.14	ug/m3	
	o-Xylene	Blank	<0.11	ug/m3	
	m/p-Xylene	Blank	<0.22	ug/m3	

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Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-114883					
	1,2-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,3-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,1-Dichloroethane	Blank	<0.10	ug/m3	
	1,1-Dichloroethylene	Blank	<0.10	ug/m3	
	Ethanol	Blank	0.32	ug/m3	
	4-Ethyl Toluene	Blank	<0.13	ug/m3	
	Methyl tert-Butyl Ether (MTBE)	Blank	<0.09	ug/m3	
	t-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	Vinyl Chloride	Blank	<0.07	ug/m3	
	Methylene Chloride	Blank	<0.09	ug/m3	
	Chlorobenzene	Blank	<0.12	ug/m3	
	Chloromethane	Blank	<0.05	ug/m3	
	Bromomethane	Blank	<0.10	ug/m3	
	Chloroethane	Blank	<0.07	ug/m3	
	cis-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	trans-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	Chlorodibromomethane	Blank	<0.22	ug/m3	
	1,1,2-Trichloroethane	Blank	<0.14	ug/m3	
	Bromoform	Blank	<0.26	ug/m3	
	1,1,2,2-Tetrachloroethane	Blank	<0.17	ug/m3	
	Hexachlorobutadiene	Blank	<0.27	ug/m3	
	1,2,4-Trichlorobenzene	Blank	<0.38	ug/m3	
	1,2,4-Trimethylbenzene	Blank	<0.13	ug/m3	
	1,3,5-Trimethylbenzene	Blank	<0.13	ug/m3	
	Cyclohexane	Blank	<0.09	ug/m3	
	cis-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	1,2-Dichloropropane	Blank	<0.12	ug/m3	
	Dichlorodifluoromethane	Blank	<0.13	ug/m3	
	Benzyl Chloride	Blank	<0.13	ug/m3	
	Carbon Disulfide	Blank	<0.08	ug/m3	
	Vinyl Acetate	Blank	<0.09	ug/m3	
	2-Hexanone	Blank	<0.10	ug/m3	
	Bromodichloromethane	Blank	<0.17	ug/m3	
	1,2-Dibromoethane	Blank	<0.19	ug/m3	
	n-Heptane	Blank	<0.10	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Blank	<0.18	ug/m3	
	Tetrahydrofuran	Blank	<0.08	ug/m3	
	Propene	Blank	<0.18	ug/m3	
	1,3-Butadiene	Blank	<0.06	ug/m3	
LFBLANK-76369					
	Acetone	Lab Fort Blank Amt.	11.87	ug/m3	
		Lab Fort Blk. Found	11.79	ug/m3	
		Lab Fort Blk. % Rec.	99.28	%	50-150

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14009

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76369					
	Benzene	Lab Fort Blank Amt.	15.95	ug/m3	
		Lab Fort Blk. Found	13.45	ug/m3	
		Lab Fort Blk. % Rec.	84.37	%	70-130
	Carbon Tetrachloride	Lab Fort Blank Amt.	31.45	ug/m3	
		Lab Fort Blk. Found	29.89	ug/m3	
		Lab Fort Blk. % Rec.	95.06	%	70-130
	Chloroform	Lab Fort Blank Amt.	24.33	ug/m3	
		Lab Fort Blk. Found	23.54	ug/m3	
		Lab Fort Blk. % Rec.	96.73	%	70-130
	1,2-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	20.37	ug/m3	
		Lab Fort Blk. % Rec.	100.66	%	70-130
	1,4-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	28.75	ug/m3	
		Lab Fort Blk. % Rec.	95.64	%	70-130
	Ethyl Acetate	Lab Fort Blank Amt.	18.01	ug/m3	
		Lab Fort Blk. Found	15.80	ug/m3	
		Lab Fort Blk. % Rec.	87.70	%	50-150
	Ethylbenzene	Lab Fort Blank Amt.	21.67	ug/m3	
		Lab Fort Blk. Found	20.64	ug/m3	
		Lab Fort Blk. % Rec.	95.22	%	70-130
	Hexane	Lab Fort Blank Amt.	17.62	ug/m3	
		Lab Fort Blk. Found	15.50	ug/m3	
		Lab Fort Blk. % Rec.	88.00	%	70-130
	Isopropanol	Lab Fort Blank Amt.	12.28	ug/m3	
		Lab Fort Blk. Found	15.67	ug/m3	
		Lab Fort Blk. % Rec.	127.60	%	50-150
	2-Butanone (MEK)	Lab Fort Blank Amt.	14.74	ug/m3	
		Lab Fort Blk. Found	14.05	ug/m3	
		Lab Fort Blk. % Rec.	95.32	%	70-130
	4-Methyl-2-Pentanone (MIBK)	Lab Fort Blank Amt.	20.48	ug/m3	
		Lab Fort Blk. Found	18.13	ug/m3	
		Lab Fort Blk. % Rec.	88.52	%	70-130
	Styrene	Lab Fort Blank Amt.	21.26	ug/m3	
		Lab Fort Blk. Found	21.04	ug/m3	
		Lab Fort Blk. % Rec.	98.94	%	70-130
	Tetrachloroethylene	Lab Fort Blank Amt.	33.90	ug/m3	
		Lab Fort Blk. Found	31.63	ug/m3	
		Lab Fort Blk. % Rec.	93.30	%	70-130
	Toluene	Lab Fort Blank Amt.	18.81	ug/m3	
		Lab Fort Blk. Found	17.36	ug/m3	
		Lab Fort Blk. % Rec.	92.30	%	70-130
	1,1,1-Trichloroethane	Lab Fort Blank Amt.	27.28	ug/m3	

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Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14009

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76369					
	1,1,1-Trichloroethane	Lab Fort Blk. Found	24.54	ug/m3	
		Lab Fort Blk. % Rec.	89.95	%	70-130
	Trichloroethylene	Lab Fort Blank Amt.	26.87	ug/m3	
		Lab Fort Blk. Found	24.03	ug/m3	
		Lab Fort Blk. % Rec.	89.43	%	70-130
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Lab Fort Blank Amt.	38.31	ug/m3	
		Lab Fort Blk. Found	38.05	ug/m3	
		Lab Fort Blk. % Rec.	99.29	%	70-130
	Trichlorofluoromethane	Lab Fort Blank Amt.	28.09	ug/m3	
		Lab Fort Blk. Found	30.51	ug/m3	
		Lab Fort Blk. % Rec.	108.60	%	70-130
	o-Xylene	Lab Fort Blank Amt.	21.71	ug/m3	
		Lab Fort Blk. Found	21.83	ug/m3	
		Lab Fort Blk. % Rec.	100.56	%	70-130
	m/p-Xylene	Lab Fort Blank Amt.	43.43	ug/m3	
		Lab Fort Blk. Found	43.30	ug/m3	
		Lab Fort Blk. % Rec.	99.68	%	70-130
	1,2-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	29.98	ug/m3	
		Lab Fort Blk. % Rec.	99.76	%	70-130
	1,3-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	29.41	ug/m3	
		Lab Fort Blk. % Rec.	97.84	%	70-130
	1,1-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	18.72	ug/m3	
		Lab Fort Blk. % Rec.	92.50	%	70-130
	1,1-Dichloroethylene	Lab Fort Blank Amt.	19.83	ug/m3	
		Lab Fort Blk. Found	19.52	ug/m3	
		Lab Fort Blk. % Rec.	98.42	%	70-130
	Ethanol	Lab Fort Blank Amt.	9.42	ug/m3	
		Lab Fort Blk. Found	7.83	ug/m3	
		Lab Fort Blk. % Rec.	83.16	%	50-150
	4-Ethyl Toluene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	27.18	ug/m3	
		Lab Fort Blk. % Rec.	110.60	%	50-150
	Methyl tert-Butyl Ether (MTBE)	Lab Fort Blank Amt.	18.02	ug/m3	
		Lab Fort Blk. Found	17.78	ug/m3	
		Lab Fort Blk. % Rec.	98.68	%	70-130
	t-1,2-Dichloroethylene	Lab Fort Blank Amt.	19.82	ug/m3	
		Lab Fort Blk. Found	17.94	ug/m3	
		Lab Fort Blk. % Rec.	90.51	%	70-130
	Vinyl Chloride	Lab Fort Blank Amt.	12.78	ug/m3	
		Lab Fort Blk. Found	10.94	ug/m3	

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BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 3/21/2008 Lims Bat # : LIMT-14062

QC Batch Number: BATCH-14009

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76369					
	Vinyl Chloride	Lab Fort Blk. % Rec.	85.66	%	70-130
	Methylene Chloride	Lab Fort Blank Amt.	17.36	ug/m3	
		Lab Fort Blk. Found	21.78	ug/m3	
		Lab Fort Blk. % Rec.	125.50	%	70-130
	Chlorobenzene	Lab Fort Blank Amt.	23.02	ug/m3	
		Lab Fort Blk. Found	21.46	ug/m3	
		Lab Fort Blk. % Rec.	93.23	%	70-130
	Chloromethane	Lab Fort Blank Amt.	10.32	ug/m3	
		Lab Fort Blk. Found	8.02	ug/m3	
		Lab Fort Blk. % Rec.	77.70	%	70-130
	Bromomethane	Lab Fort Blank Amt.	19.40	ug/m3	
		Lab Fort Blk. Found	19.23	ug/m3	
		Lab Fort Blk. % Rec.	99.11	%	70-130
	Chloroethane	Lab Fort Blank Amt.	13.19	ug/m3	
		Lab Fort Blk. Found	12.12	ug/m3	
		Lab Fort Blk. % Rec.	91.91	%	70-130
	cis-1,3-Dichloropropene	Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	21.31	ug/m3	
		Lab Fort Blk. % Rec.	93.92	%	70-130
	trans-1,3-Dichloropropene	Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	21.65	ug/m3	
		Lab Fort Blk. % Rec.	95.42	%	70-130
	Chlorodibromomethane	Lab Fort Blank Amt.	42.59	ug/m3	
		Lab Fort Blk. Found	44.01	ug/m3	
		Lab Fort Blk. % Rec.	103.34	%	70-130
	1,1,2-Trichloroethane	Lab Fort Blank Amt.	27.28	ug/m3	
		Lab Fort Blk. Found	23.67	ug/m3	
		Lab Fort Blk. % Rec.	86.78	%	70-130
	Bromoform	Lab Fort Blank Amt.	51.69	ug/m3	
		Lab Fort Blk. Found	57.30	ug/m3	
		Lab Fort Blk. % Rec.	110.84	%	70-130
	1,1,2,2-Tetrachloroethane	Lab Fort Blank Amt.	34.33	ug/m3	
		Lab Fort Blk. Found	31.73	ug/m3	
		Lab Fort Blk. % Rec.	92.42	%	70-130
	Hexachlorobutadiene	Lab Fort Blank Amt.	53.33	ug/m3	
		Lab Fort Blk. Found	45.66	ug/m3	
		Lab Fort Blk. % Rec.	85.61	%	70-130
	1,2,4-Trichlorobenzene	Lab Fort Blank Amt.	37.10	ug/m3	
		Lab Fort Blk. Found	35.40	ug/m3	
		Lab Fort Blk. % Rec.	95.41	%	70-130
	1,2,4-Trimethylbenzene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	27.32	ug/m3	
		Lab Fort Blk. % Rec.	111.16	%	70-130

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QC Batch Number: BATCH-14009

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76369					
	1,3,5-Trimethylbenzene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	26.58	ug/m3	
		Lab Fort Blk. % Rec.	108.16	%	70-130
	Cyclohexane	Lab Fort Blank Amt.	17.21	ug/m3	
		Lab Fort Blk. Found	14.93	ug/m3	
		Lab Fort Blk. % Rec.	86.77	%	50-150
	cis-1,2-Dichloroethylene	Lab Fort Blank Amt.	19.82	ug/m3	
		Lab Fort Blk. Found	18.60	ug/m3	
		Lab Fort Blk. % Rec.	93.86	%	70-130
	1,2-Dichloropropane	Lab Fort Blank Amt.	23.10	ug/m3	
		Lab Fort Blk. Found	18.95	ug/m3	
		Lab Fort Blk. % Rec.	82.03	%	70-130
	Dichlorodifluoromethane	Lab Fort Blank Amt.	24.72	ug/m3	
		Lab Fort Blk. Found	26.44	ug/m3	
		Lab Fort Blk. % Rec.	106.96	%	70-130
	Benzyl Chloride	Lab Fort Blank Amt.	25.88	ug/m3	
		Lab Fort Blk. Found	27.81	ug/m3	
		Lab Fort Blk. % Rec.	107.44	%	70-130
	Carbon Disulfide	Lab Fort Blank Amt.	15.57	ug/m3	
		Lab Fort Blk. Found	15.08	ug/m3	
		Lab Fort Blk. % Rec.	96.87	%	70-130
	Vinyl Acetate	Lab Fort Blank Amt.	17.60	ug/m3	
		Lab Fort Blk. Found	16.27	ug/m3	
		Lab Fort Blk. % Rec.	92.45	%	70-130
	2-Hexanone	Lab Fort Blank Amt.	20.48	ug/m3	
		Lab Fort Blk. Found	18.27	ug/m3	
		Lab Fort Blk. % Rec.	89.23	%	50-150
	Bromodichloromethane	Lab Fort Blank Amt.	33.50	ug/m3	
		Lab Fort Blk. Found	32.33	ug/m3	
		Lab Fort Blk. % Rec.	96.50	%	70-130
	1,2-Dibromoethane	Lab Fort Blank Amt.	38.42	ug/m3	
		Lab Fort Blk. Found	35.09	ug/m3	
		Lab Fort Blk. % Rec.	91.32	%	70-130
	n-Heptane	Lab Fort Blank Amt.	20.49	ug/m3	
		Lab Fort Blk. Found	18.21	ug/m3	
		Lab Fort Blk. % Rec.	88.89	%	50-150
	1,2-Dichlorotetrafluoroethane (114)	Lab Fort Blank Amt.	34.95	ug/m3	
		Lab Fort Blk. Found	34.48	ug/m3	
		Lab Fort Blk. % Rec.	98.66	%	70-130
	Tetrahydrofuran	Lab Fort Blank Amt.	14.74	ug/m3	
		Lab Fort Blk. Found	14.39	ug/m3	
		Lab Fort Blk. % Rec.	97.64	%	50-150
	Propene	Lab Fort Blank Amt.	8.60	ug/m3	

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QC SUMMARY REPORT

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BATCH QC: Lab fortified Blanks and Duplicates
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Method Blanks

QC Batch Number: BATCH-14009

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-76369					
	Propene	Lab Fort Blk. Found	7.59	ug/m3	
		Lab Fort Blk. % Rec.	88.22	%	50-150
	1,3-Butadiene	Lab Fort Blank Amt.	11.06	ug/m3	
		Lab Fort Blk. Found	9.55	ug/m3	
		Lab Fort Blk. % Rec.	86.42	%	70-130

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QC SUMMARY REPORT

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Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

NOTES:

QC Batch No. : BATCH-14008
Sample ID : LFBLANK-76367
Analysis : 1,2-Dichloropropane

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

QC Batch No. : BATCH-14008
Sample ID : LFBLANK-76367
Analysis : 1,3-Butadiene

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

QC Batch No. : BATCH-14008
Sample ID : LFBLANK-76367
Analysis : 4-Methyl-2-Pentanone (MIBK)

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

QC Batch No. : BATCH-14008
Sample ID : LFBLANK-76367
Analysis : Chloromethane

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

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QC SUMMARY REPORT

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Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
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Method Blanks

QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

QC BATCH NUMBER	This is the number assigned to all samples analyzed together that would be subject to comparison with a particular set of Quality Control Data.
LIMITS	Upper and Lower Control Limits for the QC ANALYSIS Reported. All values normally would fall within these statistically determined limits, unless there is an unusual circumstance that would be documented in a NOTE appearing on the last page of the QC SUMMARY REPORT. Not all QC results will have Limits defined.
Sample Amount	Amount of analyte found in a sample.
Blank	Method Blank that has been taken though all the steps of the analysis.
LFBLANK	Laboratory Fortified Blank (a control sample)
STDADD	Standard Added (a laboratory control sample)
Matrix Spk Amt Added	Amount of analyte spiked into a sample
MS Amt Measured	Amount of analyte found including amount that was spiked
Matrix Spike % Rec.	% Recovery of spiked amount in sample.
Duplicate Value	The result from the Duplicate analysis of the sample.
Duplicate RPD	The Relative Percent Difference between two Duplicate Analyses.
Surrogate Recovery	The % Recovery for non-environmental compounds (surrogates) spiked into samples to determine the performance of the analytical methods.
Sur. Recovery (ELCD)	Surrogate Recovery on the Electrolytic Conductivity Detector.
Sur. Recovery (PID)	Surrogate Recovery on the Photoionization Detector.
Standard Measured	Amount measured for a laboratory control sample
Standard Amt Added	Known value for a laboratory control sample
Standard % Recovery	% recovered for a laboratory control sample with a known value.
Lab Fort Blank Amt	Laboratory Fortified Blank Amount Added
Lab Fort Blk. Found	Laboratory Fortified Blank Amount Found
Lab Fort Blk % Rec	Laboratory Fortified Blank % Recovered
Dup Lab Fort Bl Amt	Duplicate Laboratory Fortified Blank Amount Added
Dup Lab Fort Bl Fnd	Duplicate Laboratory Fortified Blank Amount Found
Dup Lab Fort Bl % Rec	Duplicate Laboratory Fortified Blank % Recovery
Lab Fort Blank Range	Laboratory Fortified Blank Range (Absolute value of difference between recoveries for Lab Fortified Blank and Lab Fortified Blank Duplicate).
Lab Fort Bl. Av. Rec.	Laboratory Fortified Blank Average Recovery
Duplicate Sample Amt	Sample Value for Duplicate used with Matrix Spike Duplicate
MSD Amount Added	Matrix Spike Duplicate Amount Added (Spiked)
MSD Amt Measured	Matrix Spike Duplicate Amount Measured
MSD % Recovery	Matrix Spike Duplicate % Recovery
MSD Range	Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries

APPENDIX D

RISK CALCULATIONS

TABLE D-1
INHALATION EXPOSURE TO INDOOR AIR
OFFICE - VAPOR INTRUSION PATHWAY POTENTIALLY COMPLETE & GREATER THAN SCREENING VALUES

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.

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

Prepared by / Date: KJC 04/14/08
Checked by / Date: JHP 04/16/08

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
2-Chloropyridine	1.76E+01	1.4E+00	6.20E-06	8.9E-06
		SUMMARY CANCER RISK		9E-06

NC - not potentially carcinogenic or no unit risk factor available

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
2-Chloropyridine	1.76E+01	4.0E+00	1.00E+01	4.0E-01
2-Propanol	7.86E+01	1.8E+01	ND	
Ethylbenzene	2.14E+01	4.9E+00	1.00E+03	4.9E-03
		SUMMARY HAZARD INDEX		4E-01

NA - not available

TABLE D-2
INHALATION EXPOSURE TO INDOOR AIR
OFFICE - VAPOR INTRUSION PATHWAY POTENTIALLY COMPLETE & GREATER THAN SCREENING VALUES & NOT USED AT FACILIT

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m³	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.

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

Prepared by / Date: KJC 04/14/08
Checked by / Date: JHP 04/16/08

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
		SUMMARY CANCER RISK		0E+00

NC - not potentially carcinogenic or no unit risk factor available

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
2-Propanol	7.86E+01	1.8E+01	ND	
Ethylbenzene	2.14E+01	4.9E+00	1.00E+03	4.9E-03
		SUMMARY HAZARD INDEX		5E-03

NA - not available

TABLE D-3
INHALATION EXPOSURE TO INDOOR AIR
WAREHOUSE - VAPOR INTRUSION PATHWAY POTENTIALLY COMPLETE & GREATER THAN SCREENING VALUE!

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m³	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.

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

Prepared by / Date: KJC 04/14/08
Checked by / Date: JHP 04/16/08

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
2-Chloropyridine	5.70E+02	4.6E+01	6.20E-06	2.9E-04
Carbon Tetrachloride	9.15E-01	7.5E-02	1.50E-05	1.1E-06
Chloroform	1.27E+01	1.0E+00	2.30E-05	2.4E-05
		SUMMARY CANCER RISK		3E-04

NC - not potentially carcinogenic or no unit risk factor available

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
2-Chloropyridine	5.70E+02	1.3E+02	1.00E+01	1.3E+01
1,2,4-Trimethylbenzene	1.87E+02	4.3E+01	6.00E+00	7.1E+00
1,3,5-Trimethylbenzene	7.73E+01	1.8E+01	6.00E+00	2.9E+00
2-Propanol	1.75E+02	4.0E+01	ND	
4-Ethyltoluene	8.65E+01	2.0E+01	ND	
Carbon Tetrachloride	9.15E-01	2.1E-01	1.80E+02	1.2E-03
Chloroform	1.27E+01	2.9E+00	1.00E+02	2.9E-02
Ethylbenzene	3.62E+01	8.3E+00	1.00E+03	8.3E-03
		SUMMARY HAZARD INDEX		2.3E+01

NA - not available

TABLE D-4
INHALATION EXPOSURE TO INDOOR AIR
WAREHOUSE - VAPOR INTRUSION PATHWAY POTENTIALLY COMPLETE, GREATER THAN SCREENING VALUES & NOT USED AT FACILIT

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.

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

Prepared by / Date: KJC 04/14/08
Checked by / Date: JHP 04/16/08

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
Carbon Tetrachloride	9.15E-01	7.5E-02	1.50E-05	1.1E-06
		SUMMARY CANCER RISK		1E-06

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

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	1.87E+02	4.3E+01	6.00E+00	7.1E+00
1,3,5-Trimethylbenzene	7.73E+01	1.8E+01	6.00E+00	2.9E+00
2-Propanol	1 75E+02	4.0E+01	ND	
4-Ethyltoluene	8 65E+01	2.0E+01	ND	
Carbon Tetrachloride	9.15E-01	2.1E-01	1.80E+02	1.2E-03
Ethylbenzene	3.62E+01	8.3E+00	1.00E+03	8.3E-03
		SUMMARY HAZARD INDEX		1.0E+01

NA - not available

TABLE D-5
INHALATION EXPOSURE TO INDOOR AIR
PRODUCTION - VAPOR INTRUSION PATHWAY POTENTIALLY COMPLETE & GREATER THAN SCREENING VALUES

ARCH CHEMICALS
ROCHESTER, NY

EXPOSURE PARAMETERS

PARAMETER	SYMBOL	VALUE	UNITS	SOURCE
AIR CONCENTRATION	[CA]air	Calculated	ug/m³	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

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

Prepared by / Date: KJC 04/14/08
Checked by / Date: JHP 04/16/08

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
2,6-Dichloropyridine	7.76E+01	6.3E+00	6.20E-06	3.9E-05
2-Chloropyridine	5.93E+02	4.8E+01	6.20E-06	3.0E-04
Carbon Tetrachloride	1.99E+00	1.6E-01	1.50E-05	2.4E-06
Chloroform	1.02E+01	8.3E-01	2.30E-05	1.9E-05
		SUMMARY CANCER RISK		4E-04

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

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
2,6-Dichloropyridine	7.76E+01	1.8E+01	1.00E+01	1.8E+00
2-Chloropyridine	5.93E+02	1.4E+02	1.00E+01	1.4E+01
1,2,4-Trimethylbenzene	1.69E+01	3.9E+00	6.00E+00	6.4E-01
1,3,5-Trimethylbenzene	6.48E+00	1.5E+00	6.00E+00	2.5E-01
2-Propanol	1.06E+03	2.4E+02	ND	
4-Ethyltoluene	1.84E+01	4.2E+00	ND	
Carbon Tetrachloride	1.99E+00	4.5E-01	1.80E+02	2.5E-03
Chloroform	1.02E+01	2.3E+00	1.00E+02	2.3E-02
Ethylbenzene	1.29E+01	2.9E+00	1.00E+03	2.9E-03
		SUMMARY HAZARD INDEX		1.6E+01

NA - not available

TABLE D-6
INHALATION EXPOSURE TO INDOOR AIR
PRODUCTION AREA - CONSTITUENTS WITH COMPLETE PATHWAYS ONLY, GREATER THAN SCREENING VALUES & NOT USED AT FACILIT

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.

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

Prepared by / Date: KJC 04/14/08
Checked by / Date: JHP 04/16/08

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
Carbon Tetrachloride	1.99E+00	1.6E-01	1.50E-05	2.4E-06
		SUMMARY CANCER RISK		2E-06

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

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	1.69E+01	3.9E+00	6.00E+00	6.4E-01
1,3,5-Trimethylbenzene	6.48E+00	1.5E+00	6.00E+00	2.5E-01
2-Propanol	1.06E+03	2.4E+02	ND	
4-Ethyltoluene	1.84E+01	4.2E+00	ND	
Carbon Tetrachloride	1.99E+00	4.5E-01	1.80E+02	2.5E-03
Ethylbenzene	1.29E+01	2.9E+00	1.00E+03	2.9E-03
		SUMMARY HAZARD INDEX		9E-01

NA - not available