

## **DISCUSSION OF THE FLUX CHAMBER/SOIL GAS COMPARATIVE STUDY TESTING CONDUCTED IN STUDY AREA STATION NOS. 3 AND 4**

---

**BMI COMMON AREAS (EASTSIDE)  
CLARK COUNTY, NEVADA**

**Prepared for:**

**Basic Remediation Company LLC  
875 Warm Springs Road  
Henderson, Nevada 89011**

**Prepared by:**

**Dr. C.E. Schmidt  
Environmental Consultant  
19200 Live Oak Road  
Red Bluff, California 96080**

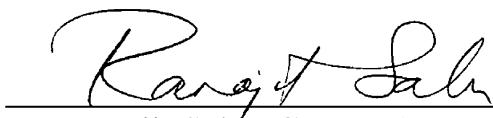
**and**

**Environmental Resources Management  
2525 Natomas Park Drive, Suite 350  
Sacramento, California 95833**

**JULY 2010**

July 2010

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

  
July 6, 2010  
Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2011)      Date  
BCR Project Manager

## TABLE OF CONTENTS

<b><u>EXECUTIVE SUMMARY</u></b>	<b>1</b>
<b><u>DISCUSSION OF OBSERVATIONS</u></b>	<b>7</b>
<b><u>CONCLUSIONS</u></b>	<b>12</b>
<b><u>REFERENCES</u></b>	<b>13</b>

## FIGURES

- 1 Site Plan with Surface Flux and Soil Gas Study Areas
- 2 Surface Flux and Soil Gas TO-15 Full Scan Results – Benzene
- 3 Surface Flux and Soil Gas TO-15 SIM Results – Benzene
- 4 Surface Flux and Soil Gas TO-15 Full Scan Results – Chloroform
- 5 Surface Flux and Soil Gas TO-15 SIM Results – Chloroform
- 6 Surface Flux and Soil Gas TO-15 Full Scan Results – Carbon Tetrachloride
- 7 Surface Flux and Soil Gas TO-15 SIM Results – Carbon Tetrachloride
- 8 Surface Flux and Soil Gas TO-15 Full Scan Results – Dibromochloropropane
- 9 Surface Flux and Soil Gas TO-15 SIM Results – Dibromochloropropane
- 10 Surface Flux and Soil Gas TO-15 Full Scan Results – Trichloroethene
- 11 Surface Flux and Soil Gas TO-15 SIM Results – Trichloroethene
- 12 Surface Flux and Soil Gas TO-15 Full Scan Results – Acetone
- 13 Surface Flux and Soil Gas TO-15 Full Scan Results – 2-Butanone

## TABLES

- 1 Summary of Field Data Collection- Surface Flux and Soil Gas Technology Comparison-Stations 3 and 4
- 2A Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>)
- 2B Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>)
- 3-4N Summary Data for Station 4 Location North
- 3-4S Summary Data for Station 4 Location South
- 3-4E Summary Data for Station 4 Location East
- 3-4W Summary Data for Station 4 Location West
- 3-4C Summary Data for Station 4 Center Location  
Table of Compound Ratios

## APPENDICES

- A Technical Memorandum by Dr. C.E. Schmidt
- B Boring Logs

## **EXECUTIVE SUMMARY**

A field study was designed and conducted in order to evaluate the comparability of volatile organic compounds (VOCs) concentration data gathered using both direct measured surface flux data and subsurface soil gas data. Although the Nevada Division of Environmental Protection (NDEP) approved sampling and analysis plan (*Sampling and Analysis Plan for Surface Flux Chamber/Soil Gas Comparison, BMI Common Areas (Eastside), Henderson, Nevada*, December 4, 2009; approved by NDEP on December 19, 2009) for this field study anticipated that data would be gathered at four study areas or stations on the Basic Management, Inc. (BMI) Common Areas (Eastside) in Clark County, Nevada, this report and the Technical Memorandum titled ***Results of the Flux Chamber/Soil Gas Comparative Study Testing Conducted In Study Areas Station Nos. 3 and 4, Henderson***, Nevada, dated June 2010 (Appendix A) provide the data collected at two of the four stations (Stations 3 and 4). Due to weather conditions, data has not yet been gathered at stations 1 and 2.

Field testing was conducted in February 2010. Due to a rejection of Station No. 3 soil gas data, as discussed in the Technical Memorandum, only the data from Station No. 4 (Figure 1) testing are presented and discussed herein. If it is decided that the additional data from stations 1 and 2 should still be collected, BRC will also re-collect the data from station 3 at that time. We believe, however, that the study objectives were met; just based on the data collected at station 4 alone.

The comparison study was conducted for project-specific VOCs in order to achieve the project objective of method evaluation and data comparison as determined by USEPA Method TO-15 using both selective ion mode (SIM) and full scan analyses. Upon review of the data, a total of seven compounds were selected for the data evaluation. Few compounds were detected in the surface flux and soil gas data sets, and these seven compounds represent the only opportunity to compare the two emission assessment approaches. In addition, it should be noted that the levels of soil gas VOC detection are few and relatively low, and the levels of the compounds found in the surface flux chamber are, as expected, even lower (e.g., post soil gas migration though the soil matrix).

Since the surface flux and soil gas samples were taken at the same geographic location and at the same time, a comparison of these data sets can be made. Variability in field data due to spatial and temporal effects was minimized as best as practicable. An analysis of the repeatability of surface flux and soil gas samples taken adjacent to each other, and also duplicate samples taken from the same sampling apparatus, provides an opportunity for the comparison of the variability

in these data sets. This is an important aspect of the data comparison since differences in data sets, trends, and relative comparisons lose meaning when data sets have high variability and little information can be gained. In this case, a comparison of the variability in side-by-side flux data or repeat data and duplicate sample data from the same flux chamber test showed acceptable precision in the method (*e.g.*, within the QC criteria of  $\pm 50\%$ ). However, that was not the case for the soil gas data gathered. As is common with soil gas data, both repeat or side-by-side sampling efforts and duplicate soil gas samples showed greater variability. This limits the value of the soil gas data.

In reviewing the collective data sets, it is concluded that the surface flux data and soil gas data adequately demonstrate the differences in these two different emission assessment approaches. This conclusion is based solely on comparing the soil gas concentration data at depth (5 and 10 feet below ground surface [bgs]) to the concentration of study compounds (*e.g.*, the seven most frequently detected compounds) as detected in the flux chamber at co-located sampling locations. At this point, the analysis of the data does not compare surface flux to modeled flux, and does not consider the properties of the predictive vapor transport model that may be used to translate these data into indoor air concentrations.

Only data reported above the practical quantitation limit or the ‘reporting limit’ were considered in the analysis (as noted in the Technical Memorandum, data validation was performed concurrently with this report, therefore, the results and values presented herein do not incorporate the results of the data validation). Data validation is provided as a separate deliverable (*Data Validation Summary Report (DVSR)—Surface Flux Chamber/Soil Gas Comparison Study; February 2010 [Dataset 69]*, BRC and ERM 2010).

The data analysis consists of two components: 1) a discussion of the absolute raw concentration data and 2) a discussion of the data expressed as ratios of surface flux chamber concentration data to soil gas concentration data – *i.e.*, relative data analysis. As noted earlier, these analyses are all based on concentration data and not flux data since the latter are not directly computable from the soil gas data without making additional assumptions.

By way of background and context, the conceptual model indicates that the primary source of the VOCs is groundwater beneath Station No. 4. The soil column is composed largely of sorted sand lenses (Appendix B). Since the known environmental source of VOCs is groundwater, groundwater is also the likely source of VOCs found in the soil column and detected in the interstitial soil gas as well as the VOC flux determined at the land surface. In an ideal scenario, the data comparison would show an orderly gradation of concentrations of the compounds found

in groundwater emanating from the capillary fringe just above groundwater to the land surface, and the overlay of several compounds might resemble a laboratory gas chromatograph (GC) column where the compounds are separated as a gas phase or mobile phase moves through the solid phase or soil. The distribution of compound concentrations along the path to the surface, for instance, would be static. However, given the dynamic nature of the underlying transport processes whereby VOCs are exchanged on to and off of the soil column as they move through the vadose zone, at any depth, one would expect to see each compound having a higher concentration below that depth and a lower concentration above. The lowest soil gas concentrations would be expected at shallow depths. In addition to migration and distribution with depth, other factors and forces would attenuate VOC migration and thus soil gas concentrations. The top few inches, for instance, would show unexpected distributions of compounds according to atmospheric pressure changes (soil gas pumping) and changes in concentration as related to ‘sinks’ of VOCs including biological metabolization, and perhaps other sources of VOCs such as biological generation. But none the less, the distributions might appear fairly uniform and consistent.

In reality, the soil column and vapor migration is very complex; an illustration of this is shown on Figures 2 through 13. In many cases, for about half of the comparisons, a progressive ‘chromatographic’ effect of the soil column on vapor transport is shown from 10 feet bgs to 5 feet bgs. Here, the relative abundance of the short list of detected study compounds at the land surface is shown in comparison to the concentration of compounds at 5 and 10 feet bgs. Both SIM and full scan mode data are shown where available. An inspection of these figures provides some insight to the relative distribution of the study compounds. The first observation is that the levels found in the flux chamber compared are low, one to two orders of magnitude lower (generally) as compared to the levels found in soil gas. This observation is supported in the literature, and is expected (Schmidt *et al.* 1998; Schmidt and Zdeb 1998). Further, the relative distribution per compound is, in fact, unique to each compound. It is also common that, with more volatile compounds, or compounds that may be ‘less interactive with the soil column’ that these compounds would show lower levels closer to the source and relatively higher levels in the soil gas at distance from the source. Conversely, higher levels of less volatile and less mobile, ‘more interactive with soil column compounds’ are expected closer to the source with lower levels at a distance from the source. These trends are seen in these data plots and this observation will be discussed in more detail later.

Another observation is that these patterns per compound generally repeat themselves for different sampling locations (*e.g.*, 4N, 4S....etc.) per study area, which shows that the soil column

within the spacing of the test area is fairly uniform. This was one of our program design objectives; to select study areas for testing where the soil column lithology was fairly consistent so that a comparison between assessment methods could be made with minimum ‘spatial’ variability. What is surprising; however, is that for about half the sample sets, the study compound soil gas concentrations are greater at 5 feet bgs than at 10 feet bgs. The reason for this may be related to a vapor-clude above the 5 feet bgs level, or a radical difference in lithology (less porous media for instance), which hampers the comparative analysis. This also demonstrates the limitations of using soil gas data for predictive purposes, since the models either assume uniformity in the soil column and uniform migration, or the modeling must be conducted in lifts or plates for each unique transport zone. We are not aware of any “sources” of VOCs at the 5 feet bgs level that may explain these data.

We have also analyzed the concentrations of study compounds in the surface flux samples and the soil gas samples per location. The raw concentration data are presented in the data tables (Tables 1 through 3). Background and QC data are provided in Tables 1 and 2, respectively, and all the raw data are presented in the Table 3 data series. As noted earlier, all data are reported for the test sites in Station No.4. Again, as expected, the levels of study compounds in the surface flux chamber are low, as a result of resistance to flow and attenuation in the soil column, and because the groundwater source is relatively low-level. In some cases, the study compounds are below even the SIM method reporting limits precluding comparison. Again, the data above reporting limits are the focus of the comparison. As such, a valid comparison of surface flux detection, both frequency of occurrence and relative abundance can be achieved by looking at the ratio of study compounds found in the surface flux chamber compared to the levels found in the soil gas at both the 5 and 10 feet bgs depths. By examining these ratios, much of the effect of sampling variability is eliminated, and conclusions can be drawn about the emission assessment methods as related to the migration of VOCs through the soil column. The surface flux concentration-to-soil gas ratio data are shown in the Table 3 data series, along with the raw concentration data. The comparison of the surface flux-to soil gas data was taken one step further by comparing the ratio of study compounds, surface flux to 5 feet bgs and surface flux to 10 feet bgs, to each other. A comparison of these two ratios at the same location per compound is useful since it speaks to the migration potential of each compound and the emission potential of the compound at the land surface.

Based on these raw and summary data, the following observations are in order for comparing the efficacy of these two technical approaches for assessing VOC migration and emission potential.

## **Observations Related to Absolute Compound Levels**

- 1) Generally, the surface flux levels are at levels expected for this low-level groundwater contamination source. (Schmidt *et al.* 1998; Schmidt and Zdeb 1998)
- 2) An order-of-magnitude reduction in soil gas concentration from 10 to 5 feet bgs, and 1-to-2 orders of magnitude reduction in soil gas from 5 feet bgs to the surface in the chamber is expected. (Schmidt *et al.* 1998; Schmidt and Zdeb 1998)
- 3) The conceptual model predicts low surface flux, with higher soil gas concentrations at 10 feet bgs as compared to 5 feet bgs. About half of the soil gas observations are consistent with this.
- 4) Migration is compound specific and within the same area, compound flux at different locales should be about the same.
- 5) About half the time or more, the soil gas compound concentrations are greater at 5 feet bgs, sometimes significantly, as compared to 10 feet bgs; the reason for this it is not known at this time.
- 6) Some compounds, like benzene are routinely found in the upper soil gas and surface flux and the source is the atmosphere- they are in equilibrium with the atmosphere and exchange into the chamber and are/can be unrelated to the groundwater source.
- 7) Potential surface contamination or atmospheric intrusion is easy to detect when you have both surface flux and soil gas data-example 4E- TCE is found in the surface flux and not in the soil gas.
- 8) Soil gas is highly variable as shown in the: a) side-by-side soil gas samples, and b) repeat or duplicate soil gas samples taken from the same probe at depth; this limits data usability for this approach.
- 9) Surface flux, both side-by-side samples or repeat samples, and duplicate samples from the same chamber location, show good precision.
- 10) These data adequately demonstrate the comparison between these two measurement approaches; surface flux testing is post vapor transport and considers both the compound physical chemistry and soil transport phenomenon.

## **Observations Related to Ratios of Surface Flux and Soil Gas Data**

- 1) Chloroform and 1,2-dibromo-3-chloropropane (DBCP) flux appear to be less dependent on depth, more volatile, and migrate out of soil column.
- 2) Benzene flux shows more soil attenuation as compared to chloroform and DBCP for instance, and shows retarded migration by comparison - note that atmospheric sources for benzene are possible.
- 3) Acetone and 2-butanone show the greatest soil attenuation; they also are more likely to be the result of biological sources.
- 4) The comparison of the ratios for each study compound shows that the compounds themselves sort out into ‘like groupings’ of different migration properties.
- 5) Migration properties are a function of compound polarity, solubility, molecular size, electronegative, hydrogen bonding, covalent bonding (attenuation on soil humus), and a host of other chemical/physical properties.
- 6) Looking at the ‘average of ratios’ per compounds further helps to eliminate the variability in the soil gas data set affording a demonstration about vapor phase transport.

## **DISCUSSION OF OBSERVATIONS**

### **Observations Related to Absolute Compound Levels**

- 1) Generally, the surface flux levels are at levels expected for this low-level groundwater contamination source.

*With low-level groundwater plumes, because of the attenuation in the soil column, low-levels of surface flux are expected. Even with analytically sensitive assessment methods such as USEPA Method TO-15, compounds found in groundwater at low level and at depth are not detected in the surface flux chamber. Validation studies have been conducted demonstrating the accuracy and precision of the flux measurement technology, and study compound levels not detected to TO-15 SIM levels do not present an exposure issue.*

- 2) An order-of-magnitude reduction in soil gas concentration from 10 to 5 feet bgs, and 1-to-2 orders of magnitude reduction in soil gas from 5 feet bgs to the surface in the chamber is expected.

*This statement is relative to the study compounds and the characteristics of the soil column. However, this general observation is typical with sandy soils and sandy loam. Greater attenuation is observed with clayey or silty soils.*

- 3) The conceptual model predicts low surface flux, with higher soil gas concentrations at 10 feet bgs as compared to 5 feet bgs.

*The conceptual model for vapor transport shows the concentration of compounds closest to the source at higher levels in the soil column and lower levels at distance from the soil column. Often, this is not the case. There could be reasons for the deviation from this conceptual model, but the exact reason at this site is unknown as this time. Assuming the soil gas data are representative, the site data indicate that the vapor transport deviates from the conceptual transport model. More likely, this indicates that soil-gas measurements may not be reliable. See Item 5 below.*

- 4) Migration is compound specific and within the same area, compound flux and soil gas concentrations at different locales within a close area should be about the same.

*This is demonstrated by looking at the relative standard deviation in both the surface flux and soil gas data sets per Station No.4. This area is relatively small (40' by 40') and the percent*

*relative standard deviation (%RSD) is acceptable for both data sets. Two compounds, chloroform and benzene, were evaluated for this data set, and the %RSD for the surface flux is 69 and 176 for these compounds, and the %RSD for the soil gas at 5 feet bgs is 54 and 114 for these compounds. The 5 feet bgs soil gas concentration data shows slightly better consistency as compared to the surface flux, however the uncertainty greatly increases for the soil gas data set when the data from the 10 feet bgs level is considered. In any event, both approaches demonstrate consistent vapor migration for an area of relatively uniform lithology and thus vapor migration.*

- 5) About half the time or more, the soil gas compound concentrations are greater at 5 feet bgs, sometimes significantly, as compared to 10 feet bgs; the reason for this it is not known at this time.

*This observation is inconsistent with the basic conceptual compound migration model, and causes uncertainty in the overall analysis. When soil gas data are collected at multiple depths, a choice must be made as to what level of source strength (e.g., soil gas concentration) should be used. Typically, the closest depth measurement to the surface at or below 5 feet bgs is used. Regardless, when lower depth soil gas samples show higher soil gas compound concentrations as compared to shallower depths, and the primary VOC source is the underlying groundwater, the uncertainty in the soil gas data set becomes an issue regarding any subsequent transport modeling.*

- 6) Some compounds, like benzene are routinely found in the upper soil gas and surface flux and the source is the atmosphere- they are in equilibrium with the atmosphere and exchange into

*Since the soil gas and the atmosphere in the boundary layer is in equilibrium, compounds found in the atmosphere will be found in the surface flux. There is no direct exchange between the compounds in the atmosphere and the flux measurement. These compounds can be removed from consideration by performing background surface flux measurements (e.g., surface flux measurements made near the test area but not over the groundwater source). This effect is well documented in the literature (Schmidt et al. 1998; Schmidt and Zdeb 1998). The soil gas data can also assist in eliminating the atmospheric source if the compound(s) in question as they are not found in the soil gas samples.*

- 7) A surface contamination is easy to detect when you have both surface flux and soil gas data- example 4E- TCE is found in the surface flux and not in the soil gas.

*Similarly to the background flux issue, surficial sources measured in the surface flux measurements can be eliminated by evaluating the compound detection in the soil gas samples. Low levels of petroleum-based and chlorinated compounds are routinely found on the soil surface, especially in urban or industrial use areas.*

- 8) Soil gas is highly variable as shown in the: a) side-by-side soil gas samples, and b) repeat or duplicate soil gas samples taken from the same probe at depth; this limits data usability.

*Precision requirements at  $\pm 50\%$  relative percent difference for field samples seems large, but, considering that laboratory variability for repeat analysis of the same sample is  $\pm 30\%$  for gas chromatography analyses, these precision criteria which include sample collection variability are actually fairly restrictive. This aspect of the field assessment work should be considered when making decisions regarding the uncertainty in the data set but not to exclude data. In other words, as we compare these technologies, the higher uncertainty in the soil gas sample set should not limit the use of the data, but rather qualify the data use. On the other hand, data with higher precision like the surface flux data can be used with less restrictive data use. In this case, the higher uncertainty in the soil gas data is primarily a function of collecting pressure-sensitive samples whereas the surface flux samples are collected, by design, at atmospheric pressure.*

- 9) Surface flux, both side-by-side samples or repeat samples, and duplicate samples from the same chamber location, show very good precision.

*See the discussion above.*

- 10) These data adequately demonstrate the comparison between these two different measurement approaches; surface flux testing is post vapor transport and considers both the compound physical chemistry and soil transport phenomenon.

*The overall consistency in the two data sets, which represent two very different measurement approaches, is very good, in that both technical approaches assess VOCs migrating from a source to the land surface and attempt to quantify concentrations at the land surface. These approaches can be considered more complimentary than competitive, considering they are generically different. The surface flux assessment approach measures flux at the land surface, it accounts for all soil vapor transport phenomenon, the approach does not rely on predictive modeling in the sub-surface lithology, but it can be influenced by topical sources and atmospheric conditions. Soil gas sampling relies on predictive modeling for transport in the soil column, is limited by sampling conditions (pressure sensitive sample collection), the sphere of*

*sample collection is very small, and the measurement is less sensitive to atmospheric conditions. As indicated in this side-by-side data set, both approaches generate representative and useful assessment data. However, on balance, we believe that the soil flux data provide more useful, direct data for subsequent analysis.*

## **Observations Related to Ratios of Surface Flux and Soil Gas Data**

- 1) Chloroform and 1,2-dichloro-3-chloropropane flux appear to be less dependent on depth, more volatile, and migrate out of soil column.

*The differences in the ratio of compound concentration in the flux chamber to compound concentration in the soil gas samples in the same or similar soil column, or the migration potential of different compounds, has to do with the chemical and physical characteristics of the each individual compound, and how each compound interacts with the soil column. There are several properties that describe the interaction and migration between compounds moving through the soil column moving away from the VOC source. As such, one would expect that compounds would have different ratios of concentrations in the surface flux as compared to compound concentrations in the soil gas. Information regarding the migration of compounds through the soil column can be obtained by looking at a comparison of the surface flux to soil gas ratio at 5 feet bgs to the surface flux to soil gas at 10 feet bgs. For this analysis, chloroform has the highest ‘ratio of ratios’ in the data set at 5.3 (relative number). One explanation for a higher ratio (higher concentration in the surface flux/soil gas ratio at 5 feet bgs compared to the same at 10 feet bgs) is that the compound moves at a faster rate through the soil column and attenuates less, resulting in lower soil gas levels and/or higher surface flux levels. This may be demonstrated here with chloroform which is probably the most volatile short-list study compound. In any event, we see differences in this ratio, and although the flux chamber accounts for these differences by measuring compound flux at the surface, in order for soil gas assessments to be representative, the predictive model must accurately account for the overall affect of the attenuation of compounds as they move through the soil column.*

- 2) Benzene flux shows more soil attenuation as compared to chloroform and DBCP for instance, and shows retarded migration by comparison- note that surface sources for benzene are possible.

*Compounds that have an affinity for organic matter in the soil column, such as benzene, may show a smaller ratio or have higher levels in the soil column as a result of attenuation on transport. Confounding effects such as topical sources or atmospheric influences may affect this relative comparison, however, these effects are typically small compared to the influence of the*

*soil column and the interaction between the compounds and the soil column. Benzene ranks lower than chloroform and DBCP (probably related to affinity to the organic content in soil), but higher than oxygenated compounds that would have a greater affinity for soil moisture and groundwater.*

- 3) Acetone and 2-butanone show the greatest soil attenuation; they also are more likely to be the result of biological sources.

*In this relative comparison, both acetone and 2-butanone behave similarly, and show much less migration potential as compared to the other study compounds. If this index (ratio at 5 feet bgs compared to ratio at 10 feet bgs) has any value, it might be that it can be used to confirm that a family of compounds or compounds that have the similar properties can and will migrate in a similar fashion through a soil column.*

- 4) The comparison of the ratios for each study compound shows that the compounds themselves sort out into ‘like groupings’ of different migration properties.

*This index or the comparison of ratios at 5 and 10 feet bgs is interesting in that the observation is significant, with chloroform at a ratio of almost 17 times that of 2-butanone. This comparison minimizes both sampling variability as well as spatial variability for a cluster of field data collected in a small area over a relative uniform groundwater source. In effect, it lends credibility to both soil gas sample collection and surface flux sample collection.*

- 5) Migration properties are a function of compound polarity, solubility, molecular size, electronegative, hydrogen bonding, covalent bonding (attenuation on soil humus), and a host of other chemical/physical properties.

*Assessing and understanding all of the significant factors that control and influence VOC migration through the soil column is beyond the scope of this study. However, it is evident that assessments at the land surface by flux chamber testing and VOC migration by soil gas testing at depth, can be viable approaches in assessing surface emissions.*

- 6) Looking at the ‘average of ratios’ per compounds further helps to eliminate the variability in the soil gas data set affording a demonstration about vapor phase transport.

The goal of evaluating the relative differences in data collected by these different assessment approaches can be realized by using ratios of data sets. In this way, general statements can be made regarding testing approaches and evaluating data use.

## **CONCLUSIONS**

Based on an evaluation of the surface flux and soil gas data as reported from Station No.4, a comparison of surface flux measurement data and soil gas sampling data can be made in reference to evaluating these two VOC emission assessment approaches. Because soil gas is extracted from the intestinal pore space in the soil column and the sampling procedure is pressure sensitive, the soil gas data have higher uncertainty as compared to surface flux data. This is based on an evaluation of the repeat sample and duplicate sample precision data. An evaluation of the raw concentration data shows non-uniform relative abundance of study compounds in the soil column as evidenced by the compound concentrations found at the 5 feet bgs and 10 feet bgs levels. This observation is counter intuitive to the vapor transport conceptual model. Levels of study compounds found in the surface flux chamber are consistently lower than the subsurface levels as expected, and do reflect the subsurface source, with the exception of possible surficial sources. Surface flux data are collected at the point of release from the soil column where the subsurface soil gas data are representative of VOC migration in the soil column and have undergone attenuation to the land surface as a function of the compound physical/chemical properties and the properties of the soil column.

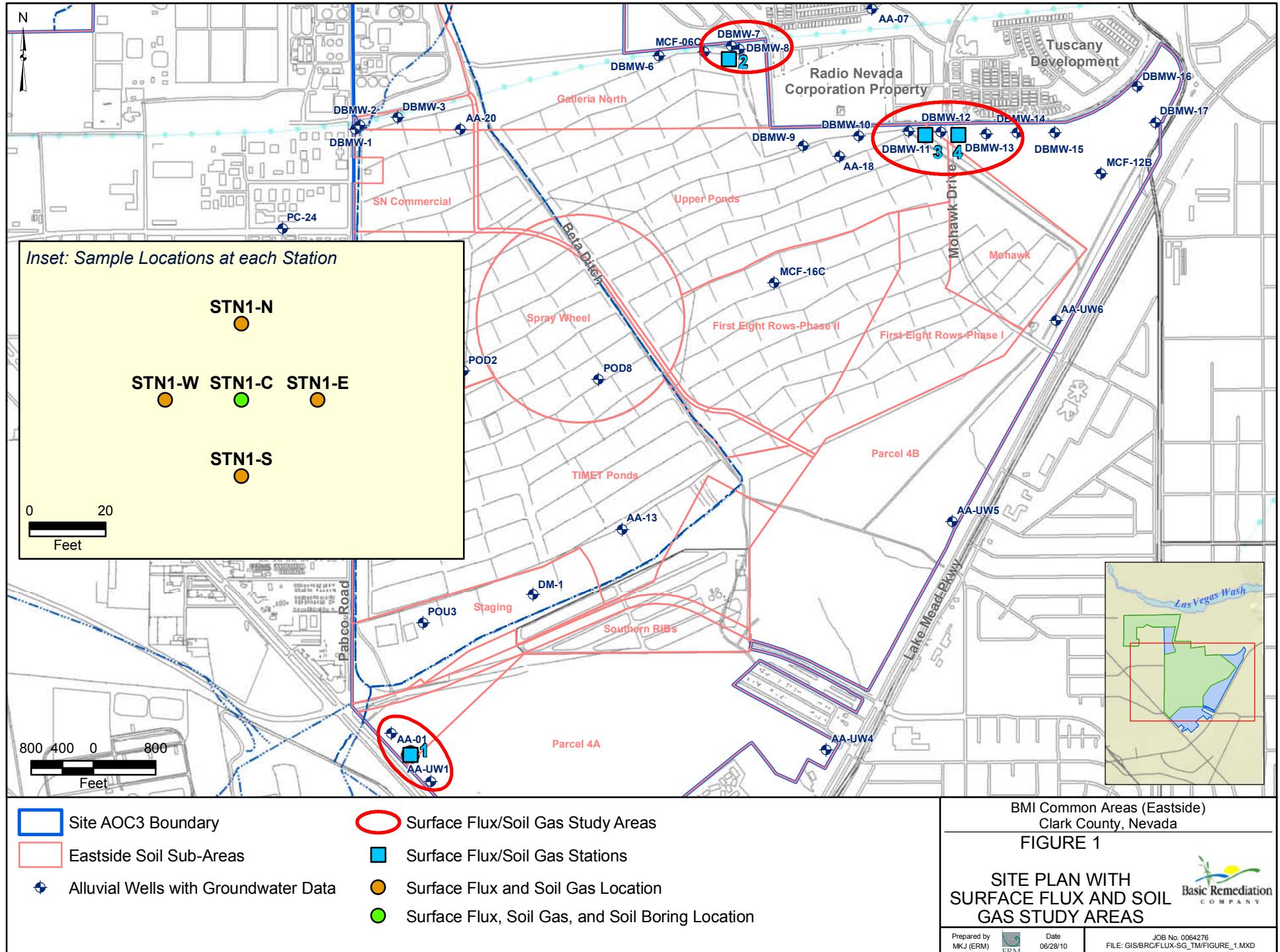
Considering both assessment approaches and based on these data, these emission assessment approaches can be evaluated using study data from Station No.4, both technologies have strengths and weaknesses in assessing surface emissions as related to subsurface sources, and both technologies have the capability of generating data that can be used to estimate surface flux and thus migration potential into existing and future structures. However, on balance, we believe that the flux approach provides data that is needed, more directly.

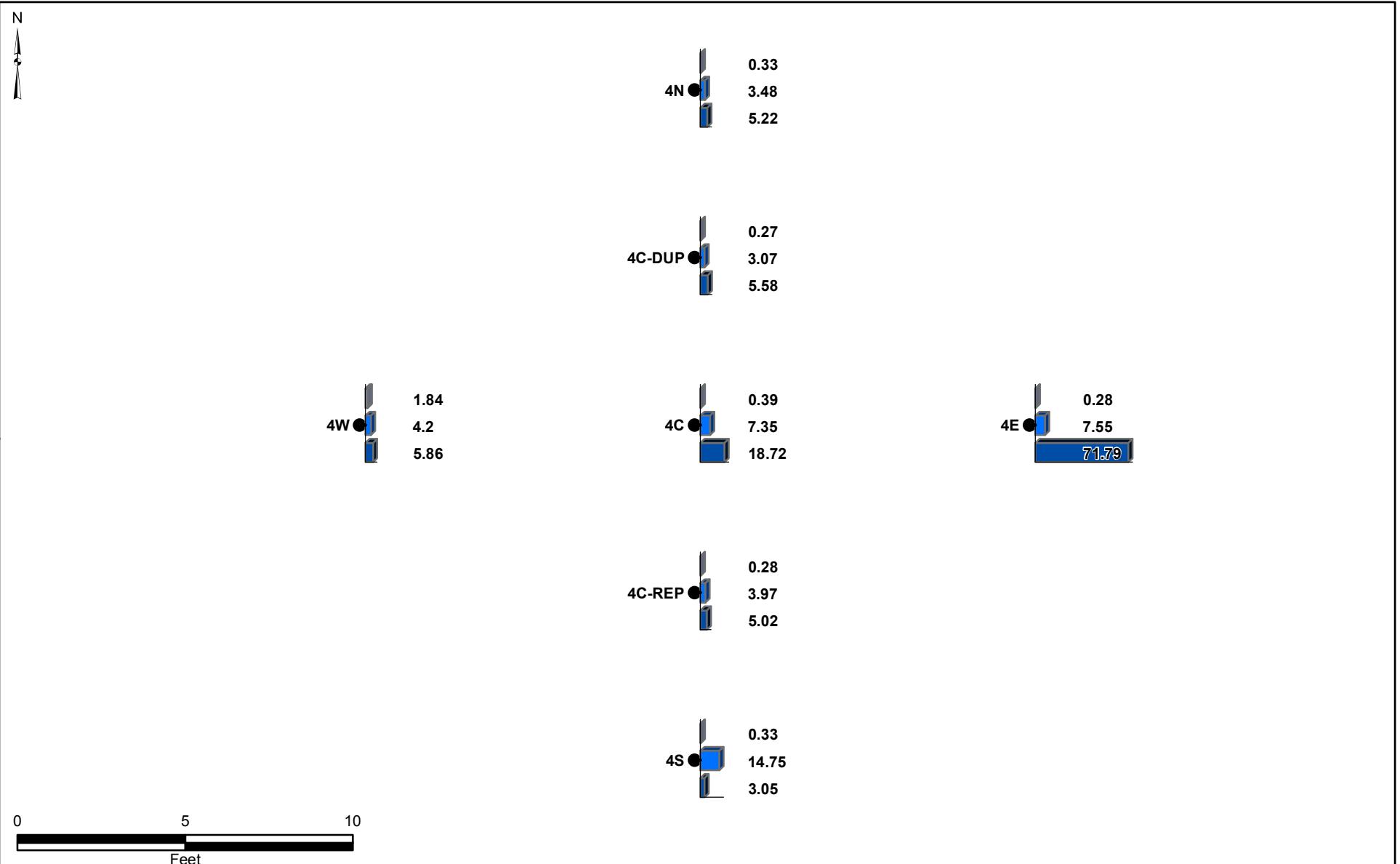
Even though the study used data from only station 4, the side-by-side data collection and comparative analysis appears to be adequate for the stated project objective. It is unlikely that the comparisons of data collected by these assessment approaches performed at other locations will add further to these conclusions.

## **REFERENCES**

- Schmidt, C.E., Copeland, T., and R. Pesin. 1998. Comparison of Measured and Modeled Emissions from Subsurface Contamination at an Industrial Site in a Residential Neighborhood. 98-WPC.01, 91th Annual Meeting of the Air and Waste Management Association, San Diego, California. June.
- Schmidt, C.E., T.F. Zdeb. 1998. Direct Measurement of Indoor Infiltration Using the US EPA Flux Chamber and Dispersion Modeling. 98-TA9C.01, 91th Annual Meeting of the Air and Waste Management Association, San Diego, California. June.
- Basic Remediation Company (BRC) and ERM. 2010. *Data Validation Summary Report; Surface Flux Chamber/Soil Gas Comparison Study; February 2010 {Dataset 69}*. BMI Common Areas (Eastside), Clark County, Nevada. July.

## FIGURES





#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 2

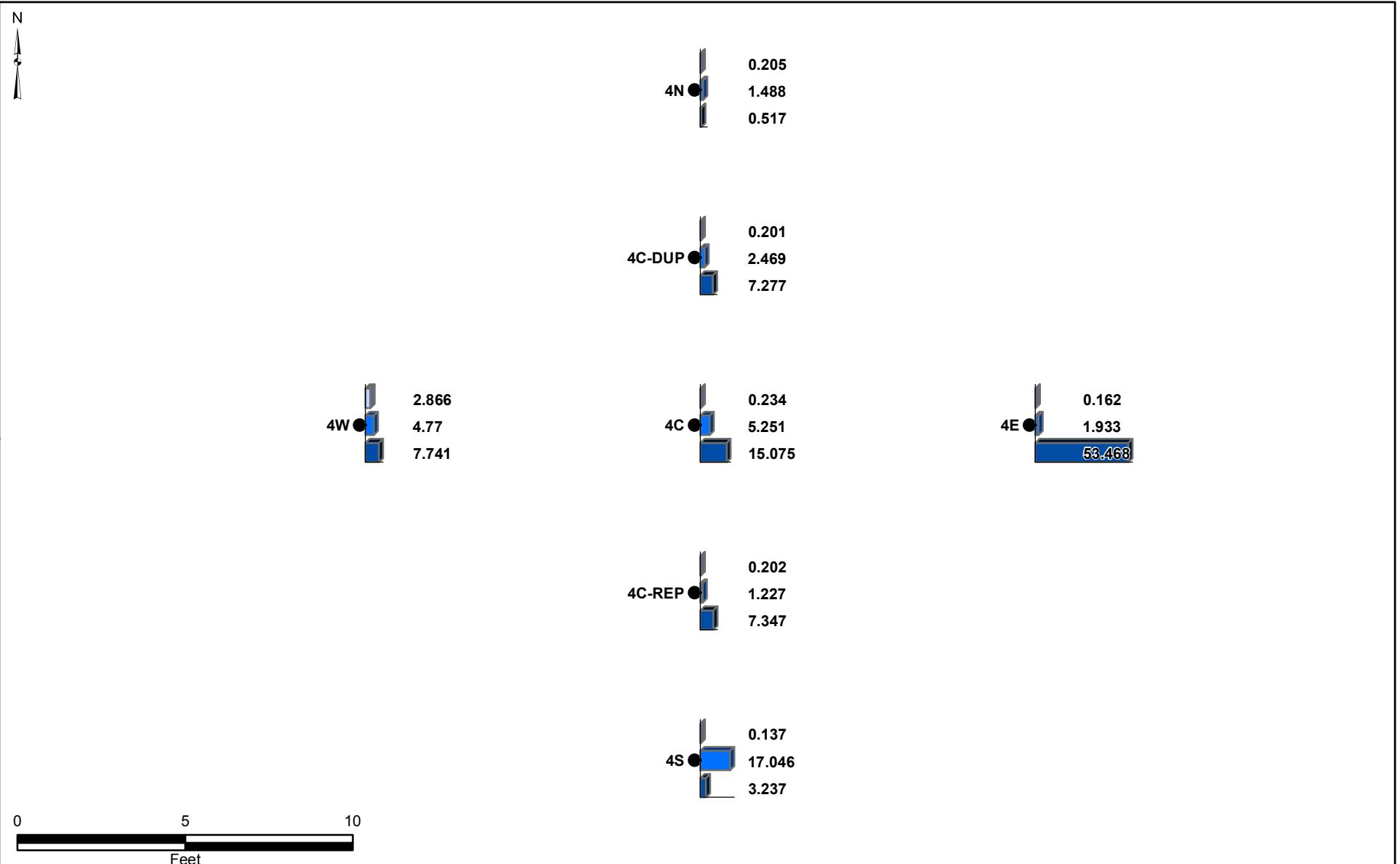
SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
BENZENE



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 3

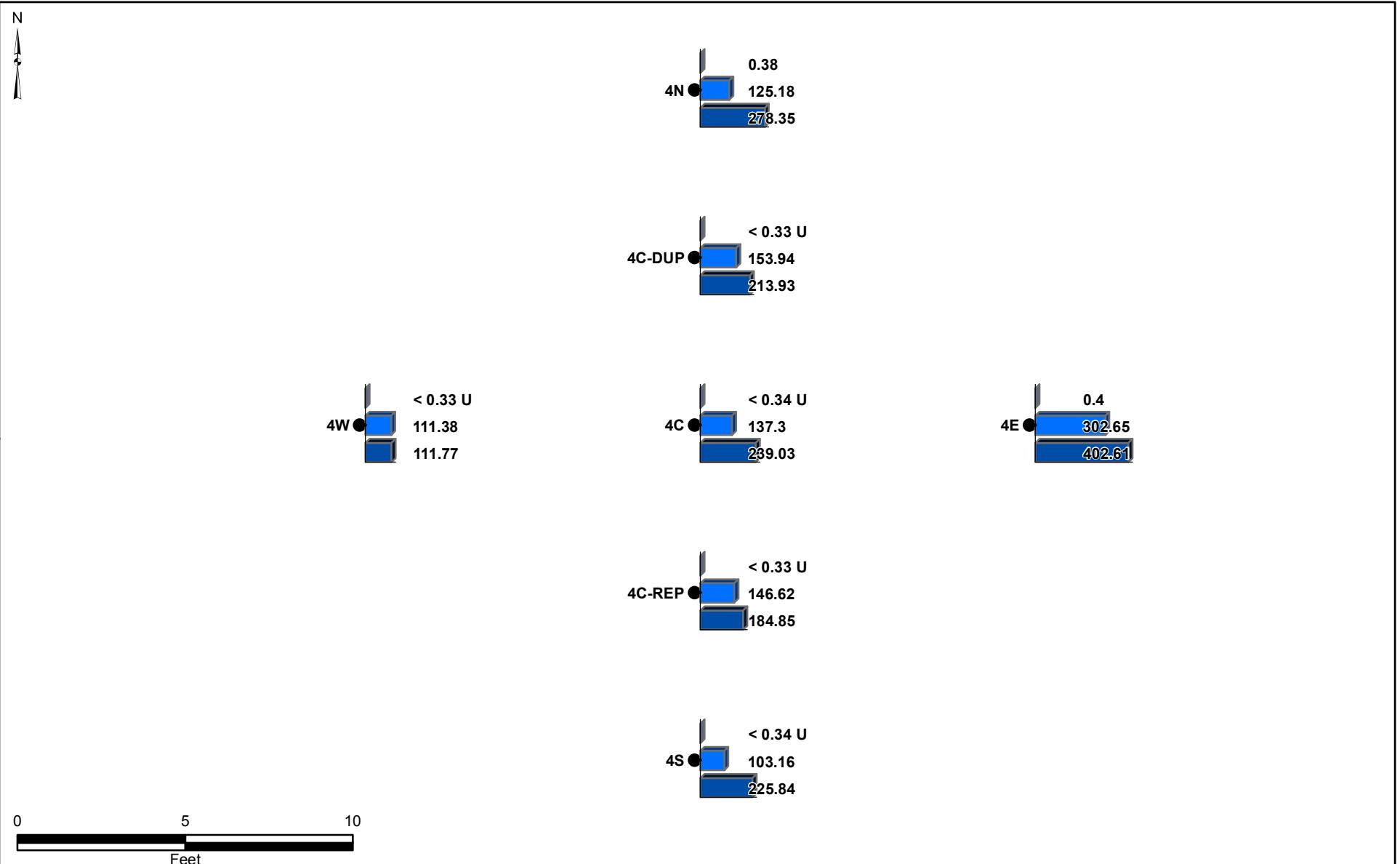
SURFACE FLUX AND SOIL GAS  
TO-15 SIM RESULTS  
BENZENE



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 4

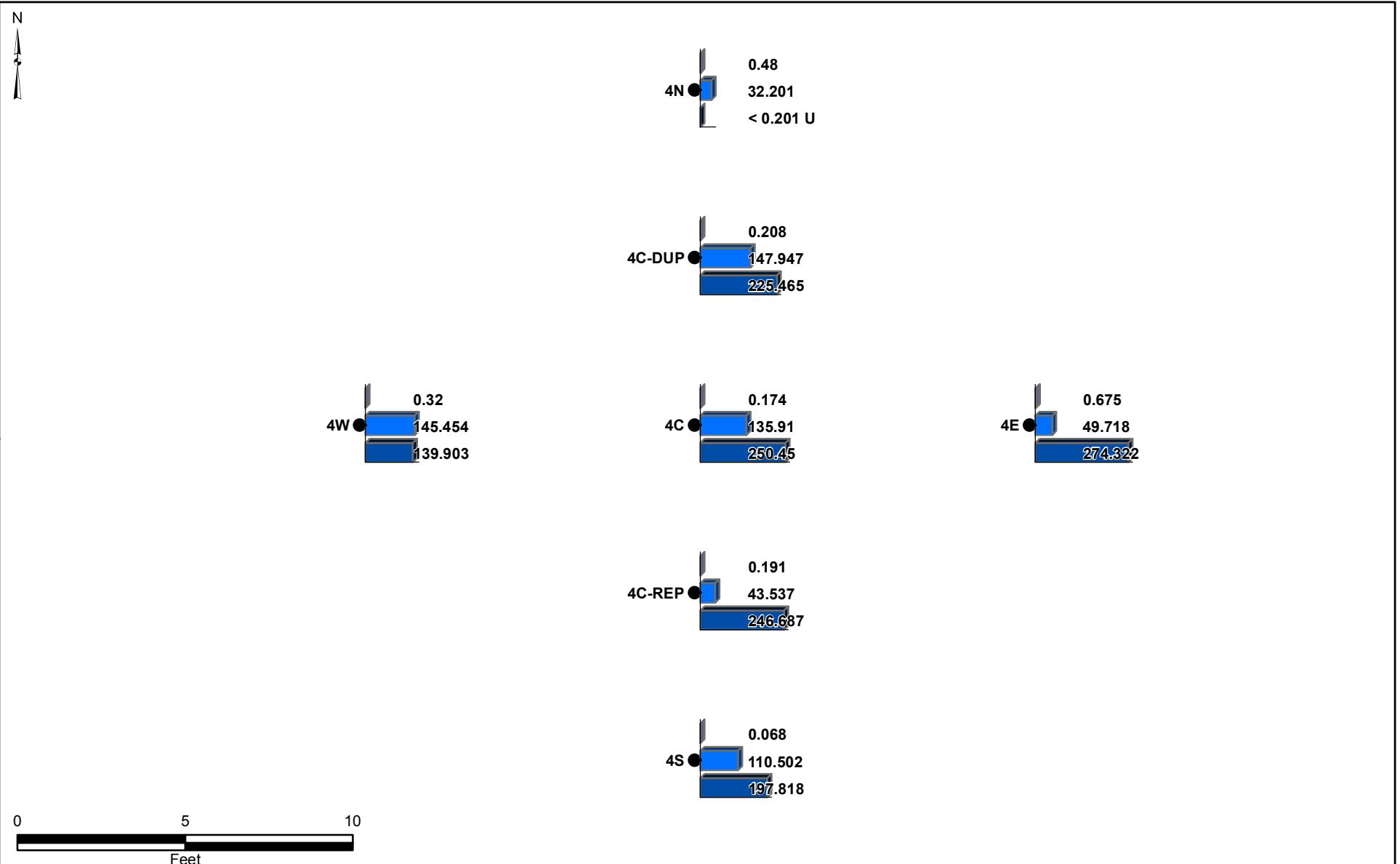
SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
CHLOROFORM



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 5

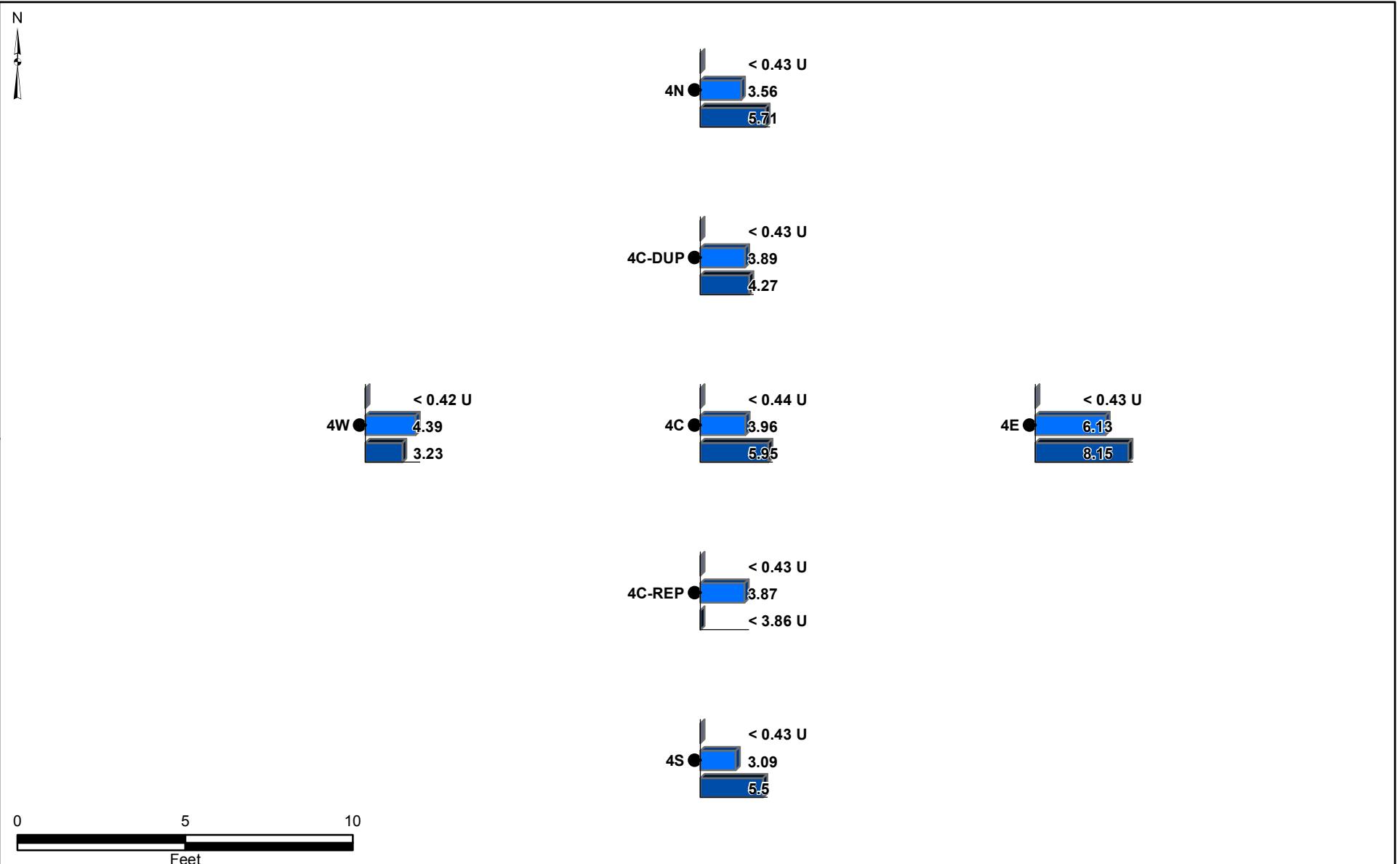
SURFACE FLUX AND SOIL GAS  
TO-15 SIM RESULTS  
CHLOROFORM



Prepared by  
MKJ (ERM)  
ERM

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 6

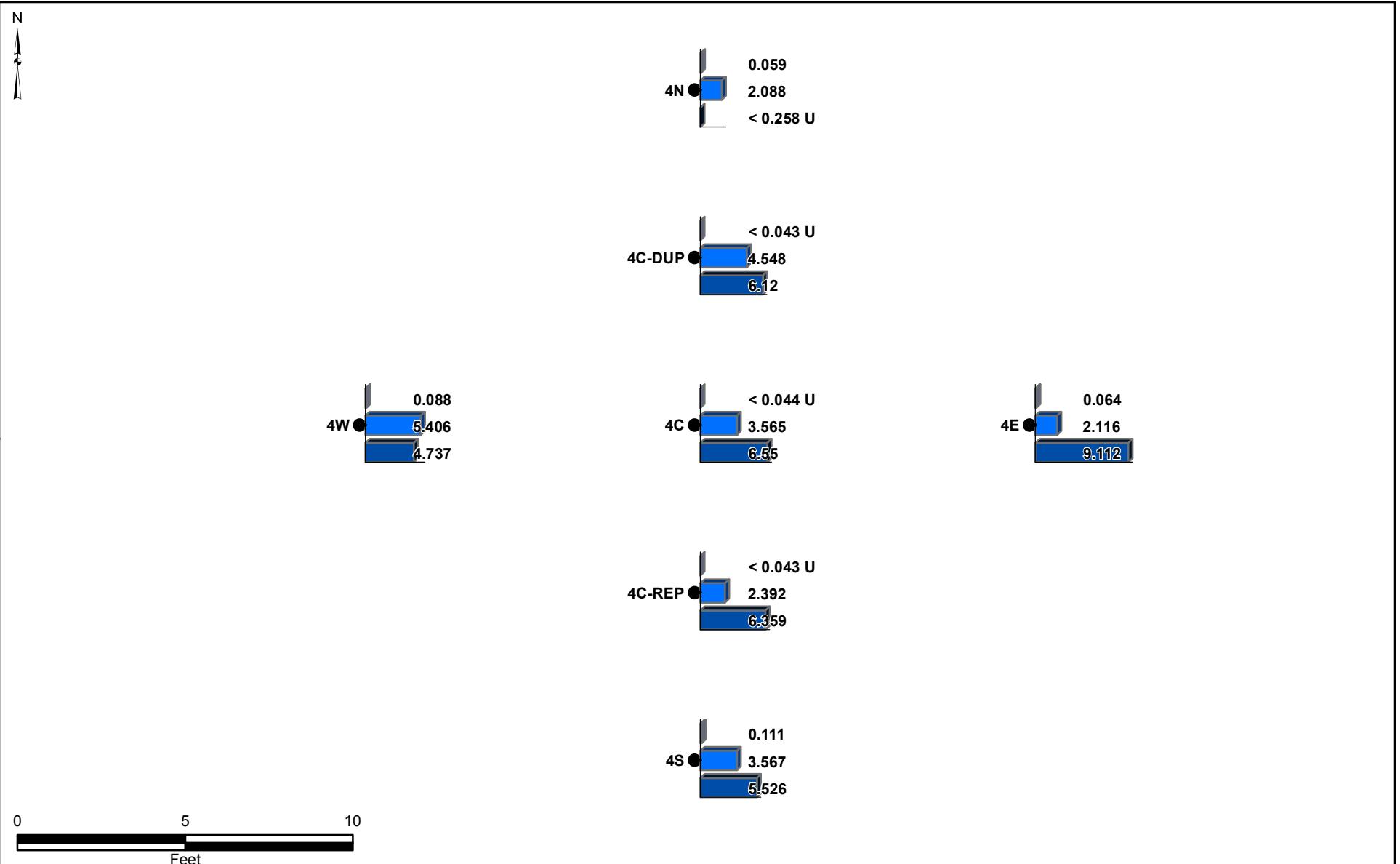
SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
CARBON TETRACHLORIDE



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 7

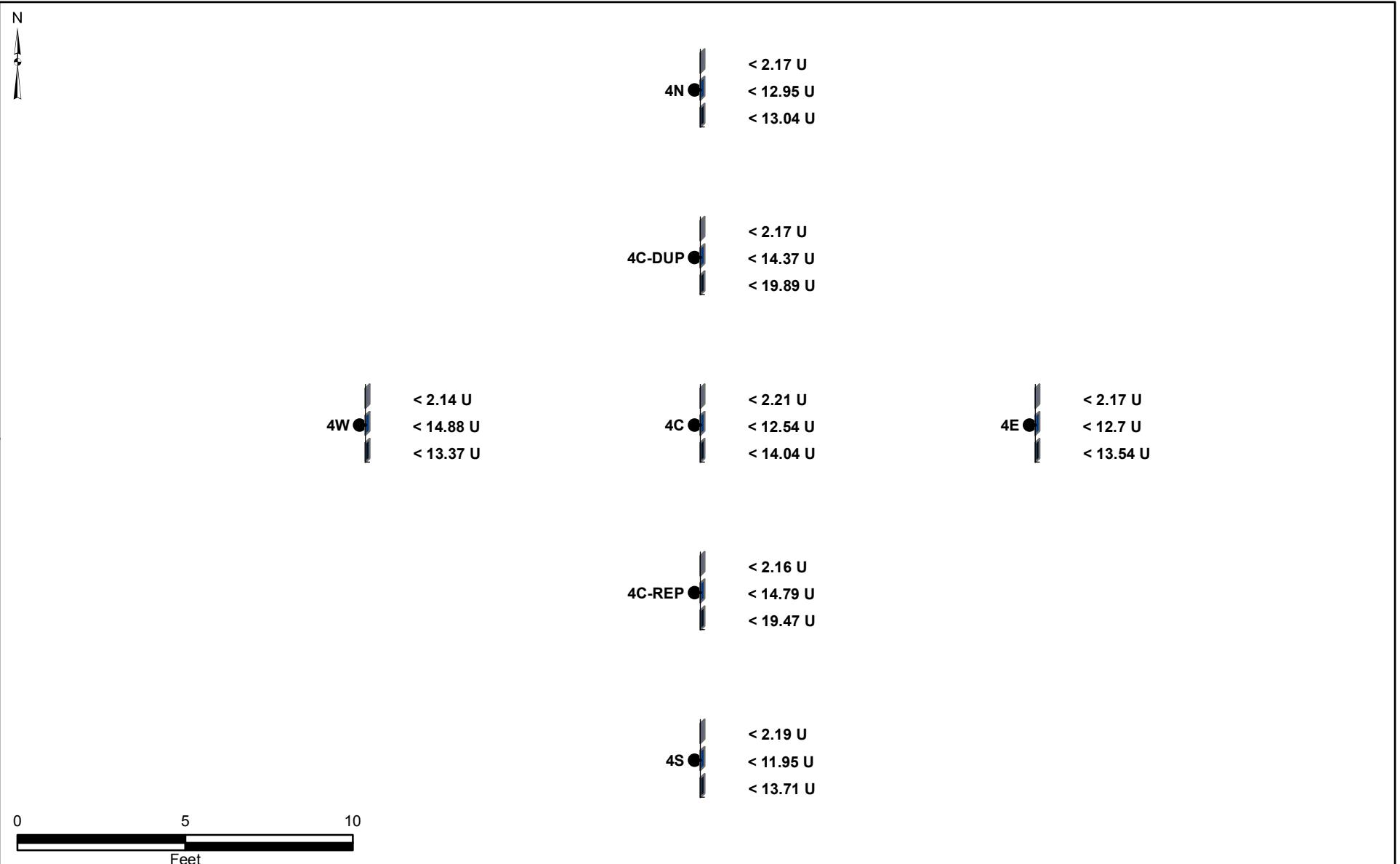
SURFACE FLUX AND SOIL GAS  
TO-15 SIM RESULTS  
CARBON TETRACHLORIDE



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_.MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 8

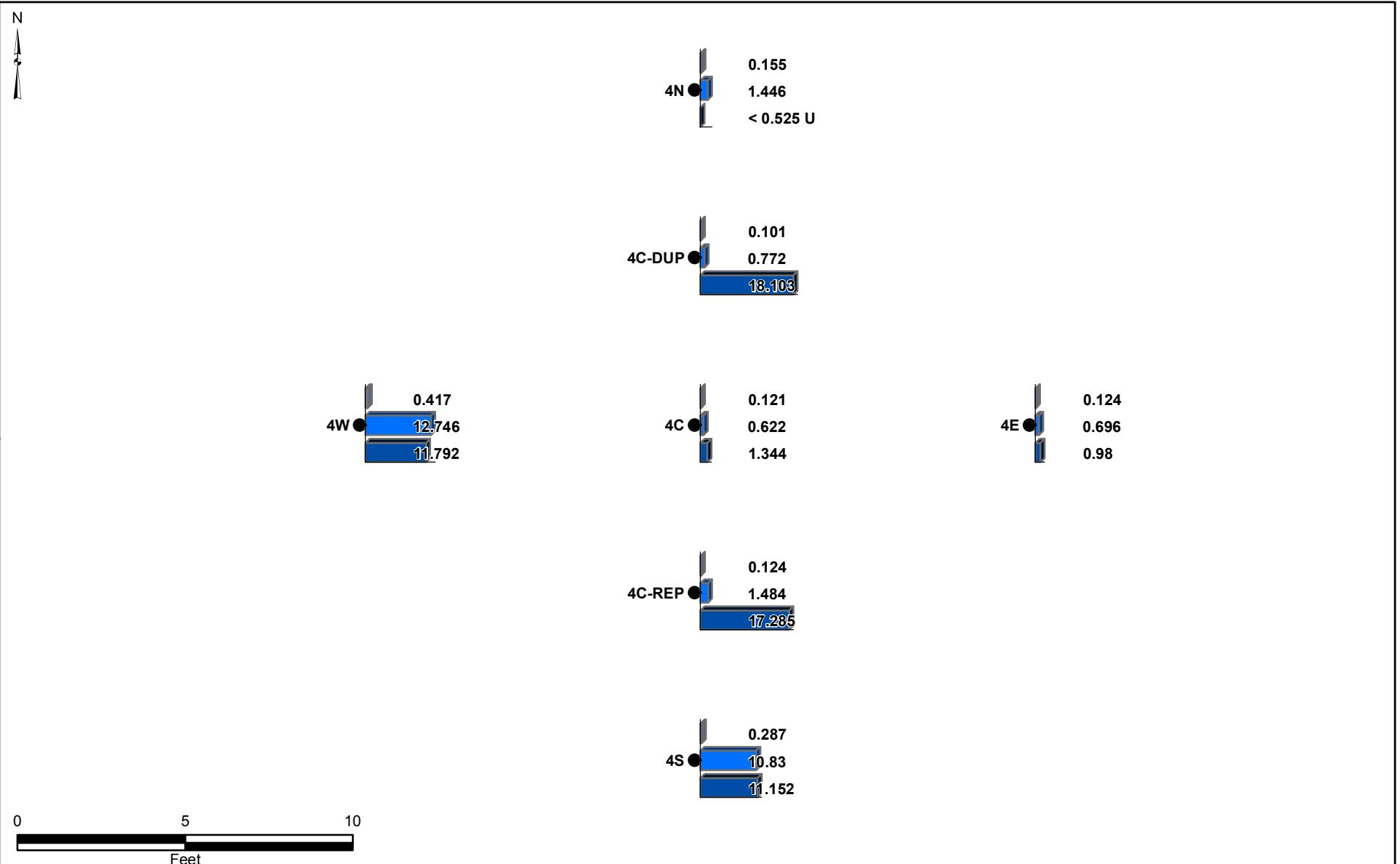
SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
DIBROMOCHLOROPROPANE



Prepared by  
MKJ (ERM)  
ERM

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_.MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 9

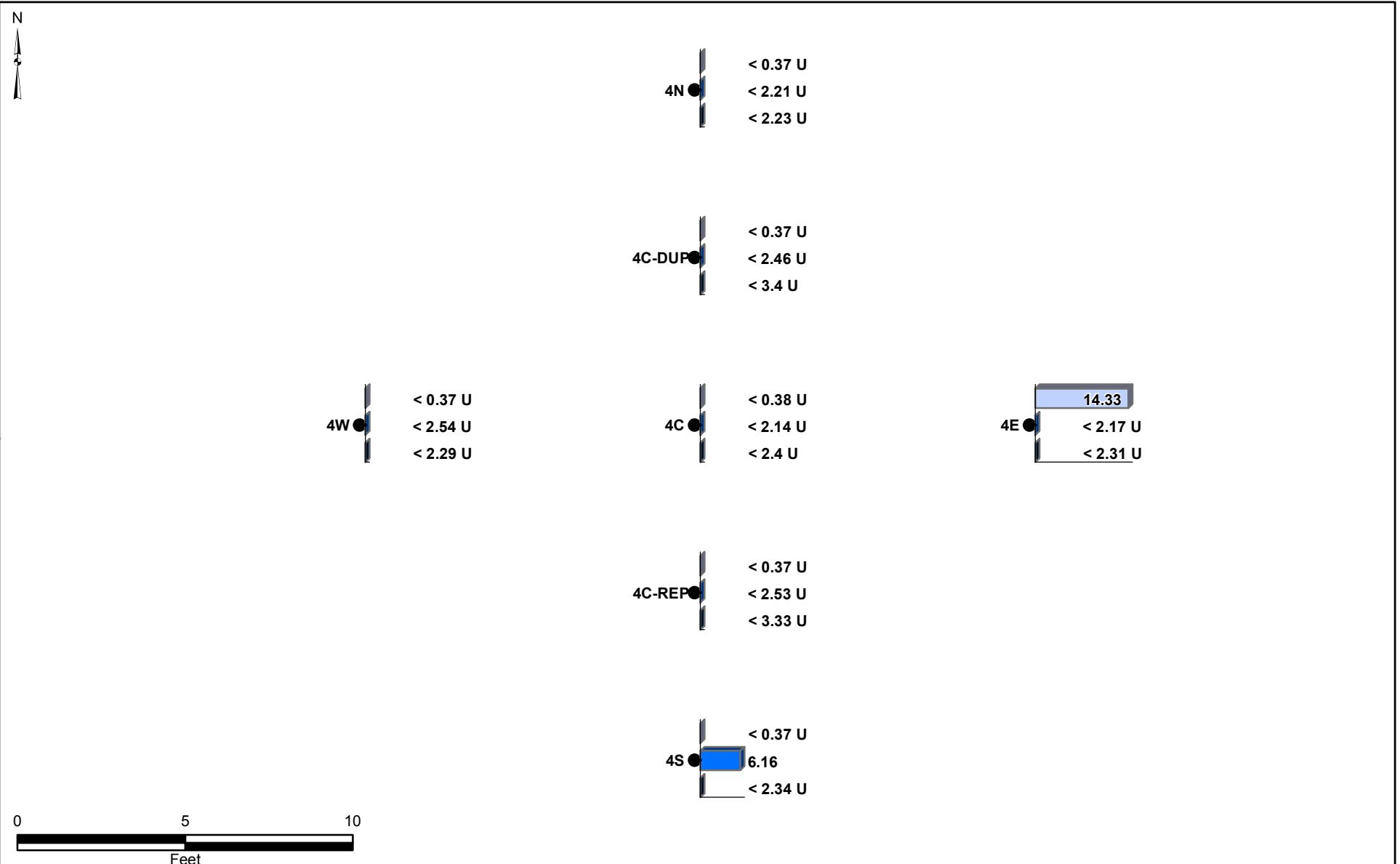
SURFACE FLUX AND SOIL GAS  
TO-15 SIM RESULTS  
DIBROMOCHLOROPROPANE



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_.MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 10

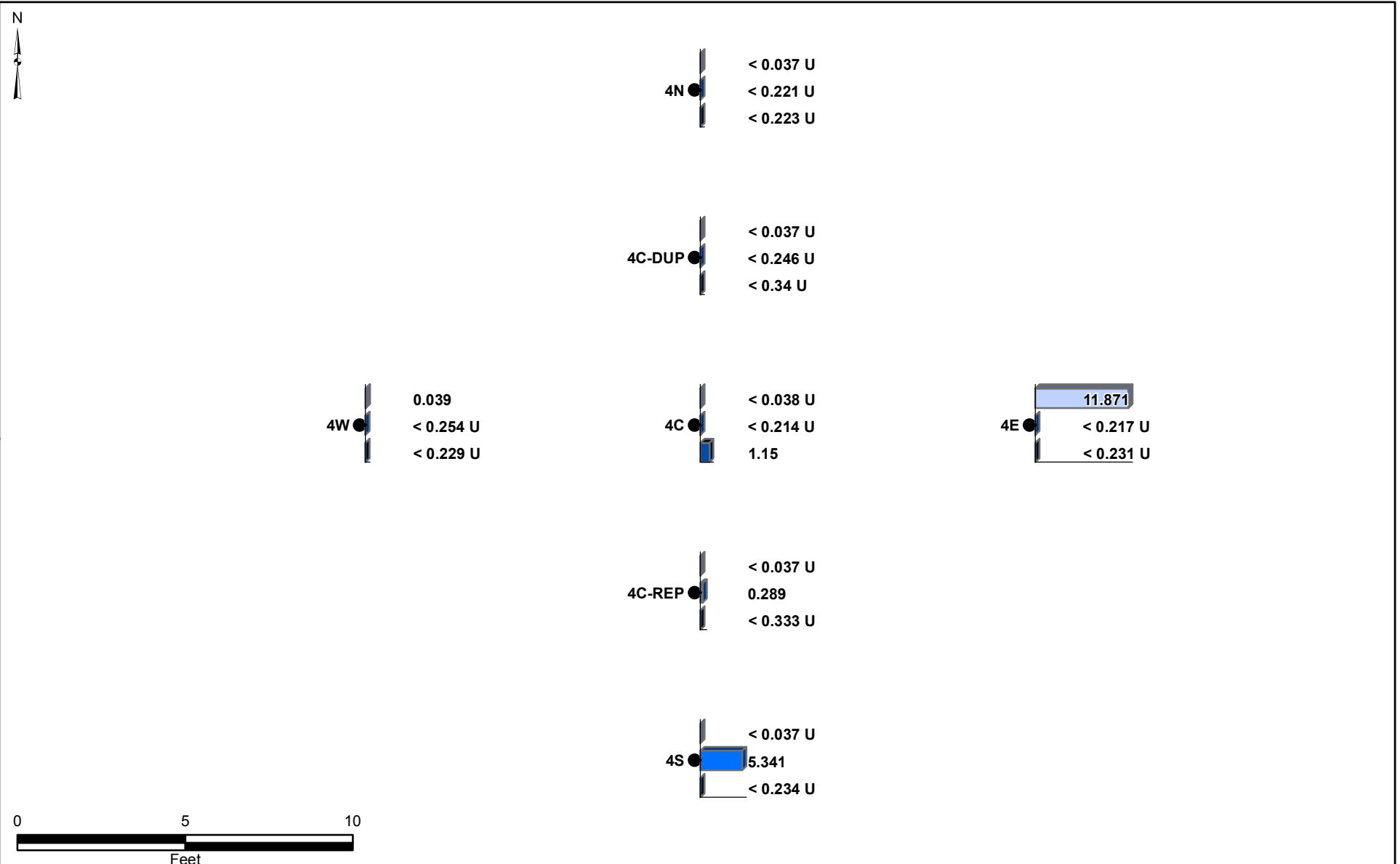
SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
TRICHLOROETHENE



Prepared by  
MKJ (ERM)  
ERM

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_.MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 11

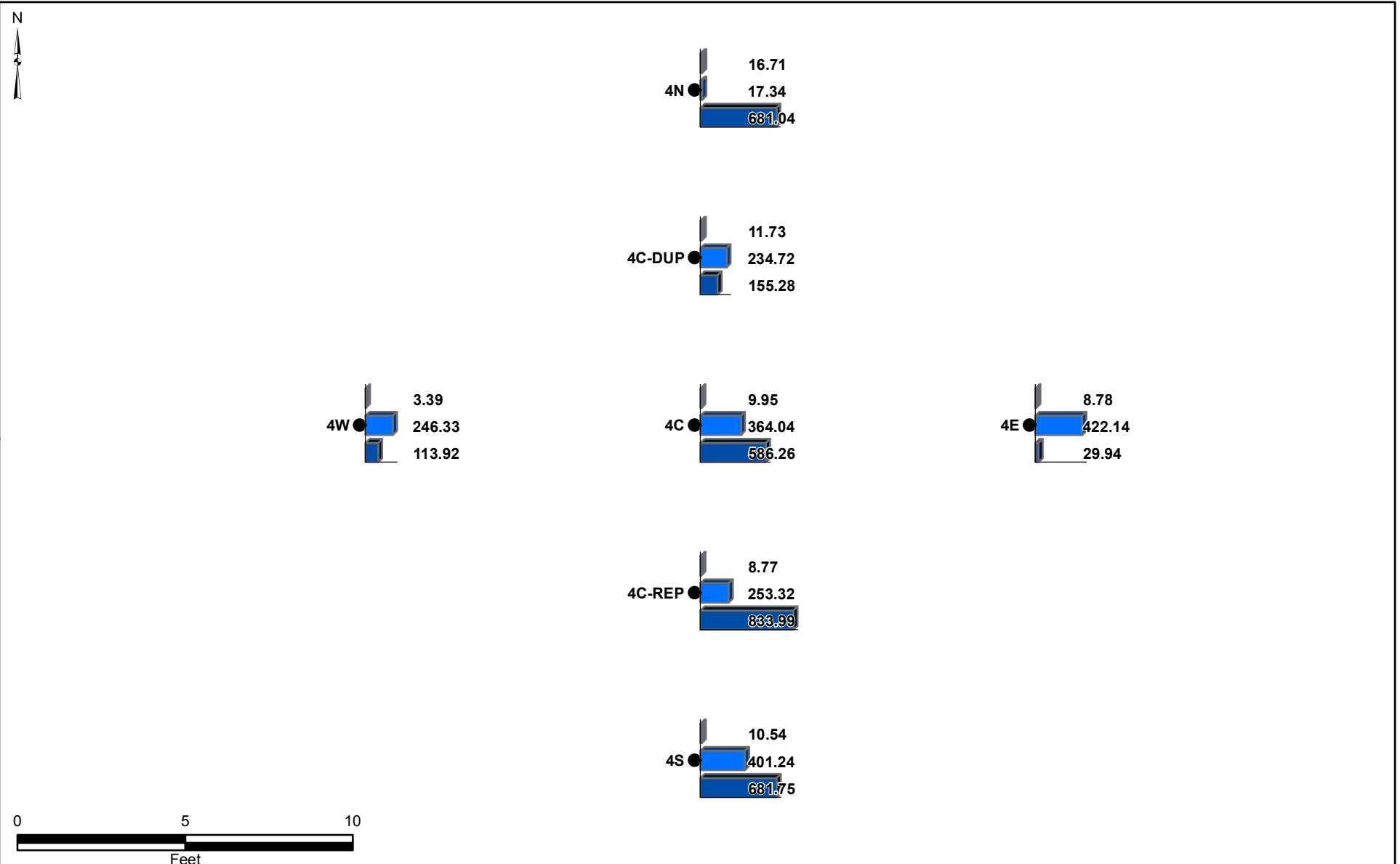
SURFACE FLUX AND SOIL GAS  
TO-15 SIM RESULTS  
TRICHLOROETHENE



Prepared by  
MKJ (ERM)  
ERM

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_.MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 12

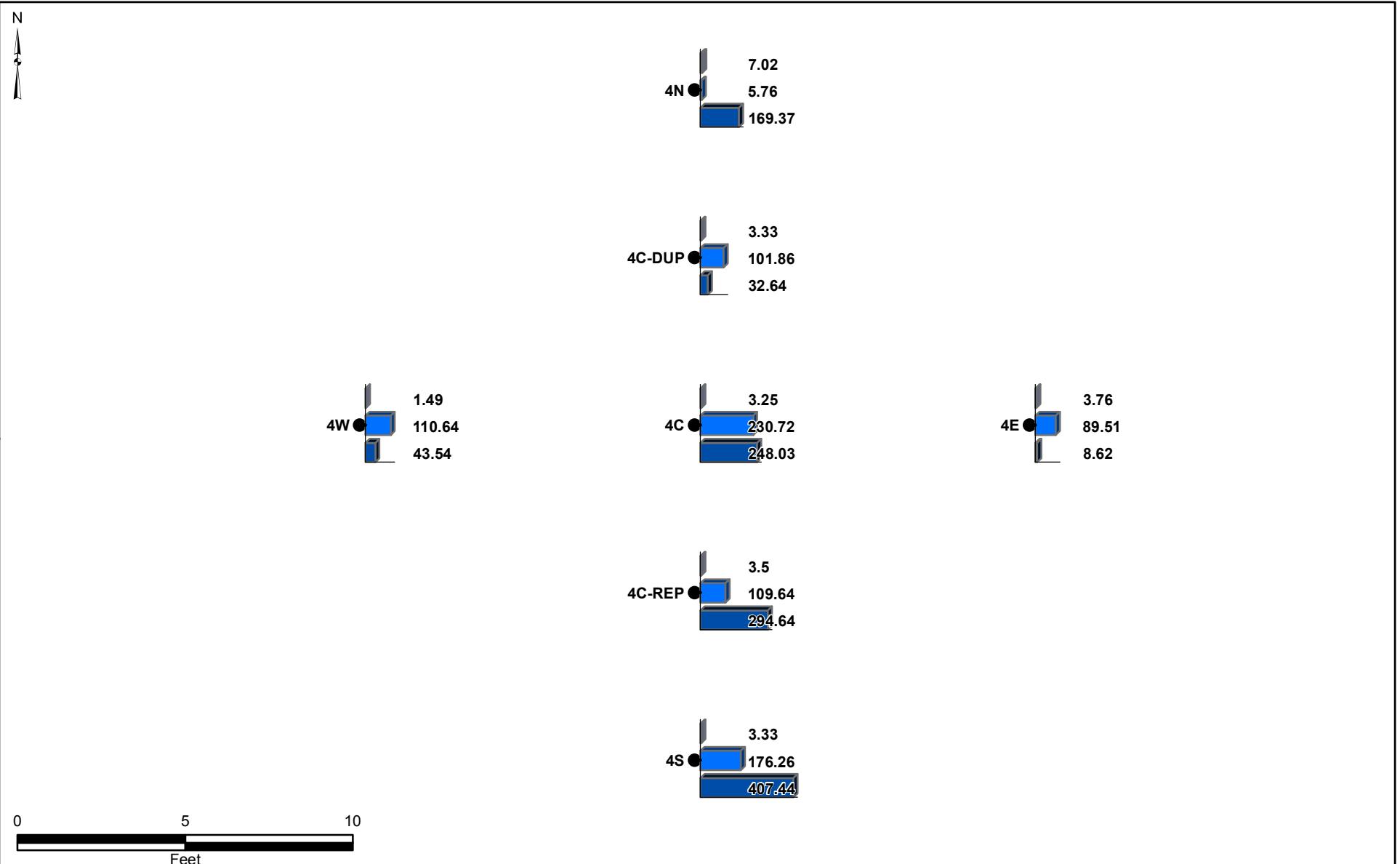
SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
ACETONE



Prepared by  
MKJ (ERM)

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD



#### Air Concentration by Depth

- 0 ft bgs (Surface Flux)
- 5 ft bgs (Soil Gas)
- 10 ft bgs (Soil Gas)

Relative widths of concentration bars are scaled proportionate to the maximum detected concentration. This normalization is done independently for each compound.

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 13

SURFACE FLUX AND SOIL GAS  
TO-15 FULL SCAN RESULTS  
2-BUTANONE



Prepared by  
MKJ (ERM)  
ERM

Date  
06/28/10

JOB No. 0064276  
FILE: GIS/BRC/FLUX-SG\_TMI/FIGURES\_MXD

## TABLES

Table 1. Summary of Field Data Collection- Surface Flux and Soil Gas Technology Comparison-Stations 3 and 4.

DATE	TIME	SOURCE/ID	VOC CAN	IN SURF	IN AIR	OUT SURF	OUT AIR	BAR P	SOIL GAS 5'	SOIL GAS 10'	COMMENT
		LOCATION	FLUX ID	°F	°F	°F	°F	("Hg)	DEPTH BLS (ft)	DEPTH BLS (ft)	
2/18/2010	1217	Station #4	SF-4E	109	83	90	65	28.0	STA-4E-5	STA-4E-10	
2/18/2010	1217	Station #4	SF-4N	91	86	88	66	28.2	STA-4N-5	STA-4N-10	
2/18/2010	1302	Station #4	SF-4C	85	86	85	69	28.1	STA-4C-5	STA-4C-10	STA-4C-5B is probably a second boring or probe blank
2/18/2010	1302	Station #4	SF-4CR	98	85	90	68	28.1	STA-4CR-5	STA-4CR-10	
2/18/2010	1302	Station #4	SF-4CRD	98	85	90	68	28.1	STA-4CRD-5	STA-4CRD-10	
2/18/2010	1411	Station #4	SF-MB-02	NA	NA	NA	NA	NA	STA-4C-Blank	Media/system blank samples, surface flux and soil gas; UHP air in canister	
											STR-3C-Blank also useful blank, 2/18/2010
2/18/2010	1119	Station #4	SF-4W	74	72	71	67	28.1	STA-4W-5	STA-4W-10	
2/18/2010	1119	Station #4	SF-4S	71	71	62	68	28.1	STA-4S-5	STA-4S-10	

R- Replicate sample

VOC- Volatile organic compound

NA- Not analyzed

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean	RPD
		SF-4C	SF-4CR			SF-4CR	SF-4CRD		
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>		
TO-15 SIM	Chloroform	0.174	0.191	0.18	-9.3	0.191	0.208	0.20	-8.5
TO-15 SIM	Benzene	0.234	0.202	0.22	15	0.202	0.201	0.20	0.50
TO-15 SIM	Carbon tetrachloride	0.044	U	0.043	U	0.044	2.3	0.043	U
TO-15 SIM	Trichloroethene	0.038	U	0.037	U	0.038	2.7	0.037	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.121	J	0.124	J	0.12	-2.4	0.124	J
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>		
TO-15	Acetone	9.95	8.77	9.4	13	8.77	11.73	10	-29
TO-15	2-Butanone	3.25	3.50	3.4	-7.4	3.50	3.33	3.4	5.0
TO-15	Chloroform	0.34	U	0.33	U	0.34	3.0	0.33	U
TO-15	Benzene	0.39	J	0.28	J	0.34	33	0.28	J
TO-15	Carbon tetrachloride	0.44	U	0.43	U	0.44	2.3	0.43	U
TO-15	Trichloroethene	0.38	U	0.37	U	0.38	2.7	0.37	U
TO-15	1,2-Dibromo-3-chloropropane	2.21	U	2.16	U	2.2	2.3	2.16	U
								2.2	-0.46

**Bold-** flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SF-MB-01	SF-MB-02	SF-SB-01	SF-SB-02	QC QUAL	ug/m <sup>3</sup>
		ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>		
		Media Blk	Media Blk	System Blk	System Blk		
TO-15 SIM	<b>Chloroform</b>	0.033	U	0.026	U	0.032	U
TO-15 SIM	<b>Benzene</b>	0.157	J	<b>0.098</b>	J	0.152	<b>0.117</b>
TO-15 SIM	<b>Carbon tetrachloride</b>	0.042	U	0.033	U	0.042	U
TO-15 SIM	<b>Trichloroethene</b>	0.036	U	0.029	U	0.036	U
TO-15 SIM	<b>1,2-Dibromo-3-chloropropane</b>	<b>0.719</b>		0.098	J	<b>0.761</b>	
TO-15	<b>Acetone</b>	<b>7.15</b>		<b>4.34</b>		<b>4.55</b>	
TO-15	<b>2-Butanone</b>	<b>2.25</b>		<b>1.96</b>		<b>1.43</b>	
TO-15	<b>Chloroform</b>	0.33	U	0.26	U	0.32	U
TO-15	<b>Benzene</b>	0.22	U	0.21	J	0.21	U
TO-15	<b>Carbon tetrachloride</b>	0.42	U	0.33	U	0.42	U
TO-15	<b>Trichloroethene</b>	0.36	U	0.29	U	0.36	U
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	2.12	U	1.67	U	2.11	U

**Bold-** flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more sa

RPD- Relative Percent Difference

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPPLICATE	Mean	RPD
		STA-4C-5	STA-4CR-5			STA-4CR-5	STA-4C-5-DUP		
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>		
ASTM 1946	% Helium Trace Gas	0.020	U	0.023	J	0.022	-14	9.81	0.028
TO-15 SIM	Chloroform	<b>135.910</b>	E	<b>43.537</b>	E	89.7	103	<b>43.537</b>	E
TO-15 SIM	Benzene	<b>5.251</b>		<b>1.227</b>		3.2	124	<b>1.227</b>	
TO-15 SIM	Carbon tetrachloride	<b>3.565</b>		<b>2.392</b>		2.98	39	<b>2.392</b>	
TO-15 SIM	Trichloroethene	0.214	U	0.289	J	0.25	-30	0.289	J
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.622	J	1.484	J	1.1	-81.9	1.484	J
		ug/m <sup>3</sup>		ug/m <sup>3</sup>			ug/m <sup>3</sup>		ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	0.020	U	0.023	J	0.022	-14	9.81	0.028
TO-15	Acetone	<b>364.04</b>		<b>253.32</b>		309	36	<b>253.32</b>	
TO-15	2-Butanone	<b>230.72</b>		<b>109.64</b>		170.2	71	<b>109.64</b>	
TO-15	Chloroform	<b>137.30</b>		<b>146.62</b>		142.0	-6.6	<b>146.62</b>	
TO-15	Benzene	<b>7.35</b>		3.97	J	5.7	60	3.97	J
TO-15	Carbon tetrachloride	3.96	J	3.87	J	3.9	2.3	3.87	J
TO-15	Trichloroethene	2.14	U	2.53	U	2.3	-16.7	2.53	U
TO-15	1,2-Dibromo-3-chloropropane	12.54	U	14.79	U	14	-16.5	14.79	U

**Bold**- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPPLICATE	Mean	RPD
		STA-4C-10	STA-4CR-10			STA-4CR-10	STA-4C-10-DUP		
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>		
ASTM 1946	% Helium Trace Gas	0.046	J	0.560		0.30	-170	0.560	0.595
TO-15 SIM	Chloroform	250.450	E	246.687	E	248.6	1.5	246.687	E
TO-15 SIM	Benzene	15.075		7.347		11.2	69	7.347	
TO-15 SIM	Carbon tetrachloride	6.550		6.359		6.45	3.0	6.359	
TO-15 SIM	Trichloroethene	1.150	J	0.333	U	0.74	110	0.333	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	1.344	J	17.285		9.3	-171.1	17.285	
								18.103	
		ug/m <sup>3</sup>		ug/m <sup>3</sup>			ug/m <sup>3</sup>		ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	0.046	J	0.560		0.30	-170	0.560	0.595
TO-15	Acetone	586.26		833.99		710	-35	833.99	155.28
TO-15	2-Butanone	248.03		294.64		271.3	-17	294.64	32.64
TO-15	Chloroform	239.03		184.85		211.9	26	184.85	213.93
TO-15	Benzene	18.72		5.02	J	11.9	115	5.02	J
TO-15	Carbon tetrachloride	5.95	J	3.86	U	4.9	42.6	3.86	J
TO-15	Trichloroethene	2.40	U	3.33	U	2.9	-32.5	3.33	U
TO-15	1,2-Dibromo-3-chloropropane	14.04	U	19.47	U	17	-32.4	19.47	U
								19.89	U
									20
									-2.1

Bold- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more sa

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data fr

Helium data is in percent (%)- note exceedance o

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	STA-3C-Blank		STA-4C-Blank		QC QUAL	
		ug/m <sup>3</sup>		ug/m <sup>3</sup>		ug/m <sup>3</sup>	
	Media Blank	Media Blank		Media Blank			
ASTM 1946	% Helium Trace Gas	0.02	U	0.02	U	0.02	U
TO-15 SIM	Chloroform	0.079	U	0.048	J	0.026	U
TO-15 SIM	Benzene	<b>0.344</b>		0.216		<b>0.344</b>	
TO-15 SIM	Carbon tetrachloride	0.102	U	0.178	J	0.033	U
TO-15 SIM	Trichloroethene	0.088	U	0.038	U	0.029	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	<b>0.550</b>		0.264		<b>0.550</b>	
						ug/m <sup>3</sup>	
ASTM 1946	% Helium Trace Gas	0.02	U	0.02	U	0.02	U
TO-15	Acetone	<b>6.16</b>		4.55		<b>6.16</b>	
TO-15	2-Butanone	<b>1.91</b>		1.60		<b>1.91</b>	
TO-15	Chloroform	0.36	U	0.34	U	0.26	U
TO-15	Benzene	0.30	J	0.26	J	0.30	J
TO-15	Carbon tetrachloride	0.47	U	0.44	U	0.33	U
TO-15	Trichloroethene	0.40	U	0.38	U	0.29	U
TO-15	1,2-Dibromo-3-chloropropane	2.36	U	2.22	U	1.67	U

**Bold**- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more sa

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data fro

Helium data is in percent (%)- note exceedance of

Table 3-4N. Summary Data for Station 4 Location North.

METHOD	COMPOUND	SF-4N ug/m3	SF-4N ug/m <sup>2</sup> ,min-1	STA-4N-5 ug/m3	STA-4N-10 ug/m3	Ratio SF/5' SG	Ratio SF/10' SG
ASTM 1946	% Helium Trace Gas	NA	NA	0.528	0.027	J	
TO-15 SIM	Chloroform	0.480	0.0185	32.201	E 0.201	U	0.015 2.4
TO-15 SIM	Benzene	0.205	0.00789	1.488	J 0.517	J	0.14 0.40
TO-15 SIM	Carbon tetrachloride	0.059	J 0.00227	J 2.088	0.258	U	0.028 0.23
TO-15 SIM	Trichloroethene	0.037	U 0.00142	U 0.221	U 0.223	U	0.17 0.17
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.155	J 0.00597	J 1.446	0.525	U	0.11 0.30
		ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3		
ASTM 1946	% Helium Trace Gas	NA	NA	0.528	0.027	J	
TO-15	Acetone	16.71	0.643	17.34	J 681.04	0.96	0.025
TO-15	2-Butanone	7.02	0.270	5.76	169.37	1.2	0.041
TO-15	Chloroform	0.38	J 0.0146	J 125.18	278.35	0.0030	0.0014
TO-15	Benzene	0.33	J 0.0127	J 3.48	J 5.22	J	0.095 0.063
TO-15	Carbon tetrachloride	0.43	U 0.0166	U 3.56	J 5.71	J	0.12 0.075
TO-15	Trichloroethene	0.37	U 0.0142	U 2.21	U 2.23	U	0.17 0.17
TO-15	1,2-Dibromo-3-chloropropane	2.17	U 0.0835	U 12.95	U 13.04	U	0.17 0.17

Table 3-4S. Summary Data for Station 4 Location South.

METHOD	COMPOUND	SF-4S ug/m3	SF-4S ug/m <sup>2</sup> ,min-1	STA-4S-5 ug/m3	STA-4S-10 ug/m3	Ratio SF/5' SG	Ratio SF/10' SG
ASTM 1946	% Helium Trace Gas	NA	NA	0.178	0.020	U	
TO-15 SIM	Chloroform	0.068	J	0.00262	J	110.502	E
TO-15 SIM	Benzene	0.137		0.00527		17.046	3.237
TO-15 SIM	Carbon tetrachloride	0.111	J	0.00427	J	3.567	5.526
TO-15 SIM	Trichloroethene	0.037	U	0.00142	U	5.341	0.234
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.287		0.0110		10.830	11.152
		ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3		
ASTM 1946	% Helium Trace Gas	NA	NA	0.178	0.020	U	
TO-15	Acetone	10.54		0.4058		401.24	681.75
TO-15	2-Butanone	3.33		0.1282		176.26	407.44
TO-15	Chloroform	0.34	U	0.0131	U	103.16	225.84
TO-15	Benzene	0.33	J	0.0127	J	14.75	3.05
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	3.09	5.50
TO-15	Trichloroethene	0.37	U	0.0142	U	6.16	2.34
TO-15	1,2-Dibromo-3-chloropropane	2.19	U	0.0843	U	11.95	13.71

Table 3-4E. Summary Data for Station 4 Location East.

METHOD	COMPOUND	SF-4E ug/m3	SF-4E ug/m <sup>2</sup> ,min-1	STA-4E-5 ug/m3	STA-4E-10 ug/m3	Ratio SF/5' SG	Ratio SF/10' SG
ASTM 1946	% Helium Trace Gas	NA	NA	0.022	0.020	U	
TO-15 SIM	Chloroform	0.675	0.02599	49.718	E 274.322	E	0.014 0.0025
TO-15 SIM	Benzene	0.162	0.00624	1.933	53.468	E	0.084 0.0030
TO-15 SIM	Carbon tetrachloride	0.064	J 0.00246	J 2.116	9.112		0.030 0.0070
TO-15 SIM	Trichloroethene	11.871	0.45703	0.217	U 0.231	U	55 51
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.124	J 0.0048	J 0.696	J 0.980	J	0.18 0.13
		ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3		
ASTM 1946	% Helium Trace Gas	NA	NA	0.022	0.020	U	
TO-15	Acetone	8.78	0.338	422.14	29.94	0.021 0.29	
TO-15	2-Butanone	3.76	0.145	89.51	8.62	0.042 0.44	
TO-15	Chloroform	0.40	J 0.0154	J 302.65	402.61		0.0013 0.0010
TO-15	Benzene	0.28	J 0.0108	J 7.55	71.79		0.037 0.0039
TO-15	Carbon tetrachloride	0.43	U 0.0166	U 6.13	J 8.15	J	0.070 0.053
TO-15	Trichloroethene	14.33	0.552	2.17	U 2.31	U	6.6 6.2
TO-15	1,2-Dibromo-3-chloropropane	2.17	U 0.0835	U 12.70	U 13.54	U	0.17 0.16

Table 3-4W. Summary Data for Station 4 Location West.

METHOD	COMPOUND	SF-4W		SF-4W		STA-4W-5		STA-4W-10		Ratio	Ratio
		ug/m3	ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	SF/5' SG	SF/10' SG
ASTM 1946	% Helium Trace Gas	NA		NA		0.126		32.0	U		
TO-15 SIM	Chloroform	0.320		0.01232		145.454	E	139.903	E	0.0022	0.0023
TO-15 SIM	Benzene	2.866		0.11034		4.770		7.741		0.60	0.37
TO-15 SIM	Carbon tetrachloride	0.088	J	0.00339	J	5.406		4.737		0.016	0.019
TO-15 SIM	Trichloroethene	0.039	J	0.00150	J	0.254	U	0.229	U	0.15	0.17
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.417		0.0161		12.746		11.792		0.033	0.035
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3			
ASTM 1946	% Helium Trace Gas	NA		NA		0.126		32.0	U		
TO-15	Acetone	3.39	J	0.1305	J	246.33		113.92		0.014	0.030
TO-15	2-Butanone	1.49		0.0574		110.64		43.54		0.013	0.034
TO-15	Chloroform	0.33	U	0.0127	U	111.38		111.77		0.0030	0.0030
TO-15	Benzene	1.84		0.0708		4.20	J	5.86	J	0.44	0.31
TO-15	Carbon tetrachloride	0.42	U	0.0162	U	4.39	J	3.23	J	0.096	0.13
TO-15	Trichloroethene	0.37	U	0.0142	U	2.54	U	2.29	U	0.15	0.16
TO-15	1,2-Dibromo-3-chloropropane	2.14	U	0.0824	U	14.88	U	13.37	U	0.14	0.16

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4C ug/m3	SF-4C ug/m <sup>2</sup> ,min-1	STA-4C-5 ug/m3	STA-4C-10 ug/m3	Ratio SF/5' SG	Ratio SF/10' SG
ASTM 1946	% Helium Trace Gas	NA	NA	0.020	U 0.046	J	
TO-15 SIM	Chloroform	0.174	0.00670	135.910	E 250.450	E	0.0013 0.00069
TO-15 SIM	Benzene	0.234	0.00901	5.251	15.075		0.045 0.016
TO-15 SIM	Carbon tetrachloride	0.044	U 0.00169	U 3.565	6.550		0.012 0.0067
TO-15 SIM	Trichloroethene	0.038	U 0.00146	U 0.214	U 1.150	J	0.18 0.033
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.121	J 0.00466	J 0.622	J 1.344	J	0.19 0.090
		ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3		
ASTM 1946	% Helium Trace Gas	NA	NA	0.020	U 0.046	J	
TO-15	Acetone	9.95	0.383	364.04	586.26	0.027	0.017
TO-15	2-Butanone	3.25	0.125	230.72	248.03	0.014	0.013
TO-15	Chloroform	0.34	U 0.0131	U 137.30	239.03	0.0025	0.0014
TO-15	Benzene	0.39	J 0.0150	J 7.35	18.72	0.053	0.021
TO-15	Carbon tetrachloride	0.44	U 0.0169	U 3.96	J 5.95	J	0.11 0.074
TO-15	Trichloroethene	0.38	U 0.0146	U 2.14	U 2.40	U	0.18 0.16
TO-15	1,2-Dibromo-3-chloropropane	2.21	U 0.0851	U 12.54	U 14.04	U	0.18 0.16

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CR		SF-4CR		STA-4CR-5		STA-4CR-10		Ratio	Ratio
		ug/m3		ug/m2,min-1		ug/m3		ug/m3		SF/5' SG	SF/10' SG
ASTM 1946	% Helium Trace Gas	NA		NA		0.023	J	0.560			
TO-15 SIM	Chloroform	0.191		0.00735		43.537	E	246.687	E	0.0044	0.00077
TO-15 SIM	Benzene	0.202		0.00778		1.227		7.347		0.16	0.027
TO-15 SIM	Carbon tetrachloride	0.043	U	0.00166	U	2.392		6.359		0.018	0.0068
TO-15 SIM	Trichloroethene	0.037	U	0.00142	U	0.289	J	0.333	U	0.13	0.11
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.124	J	0.00477	J	1.484	J	17.285		0.084	0.0072
		ug/m3		ug/m2,min-1		ug/m3		ug/m3			
ASTM 1946	% Helium Trace Gas	NA		NA		0.023	J	0.560			
TO-15	Acetone	8.77		0.338		253.32		833.99		0.035	0.011
TO-15	2-Butanone	3.50		0.135		109.64		294.64		0.032	0.012
TO-15	Chloroform	0.33	U	0.0127	U	146.62		184.85		0.0023	0.0018
TO-15	Benzene	0.28	J	0.0108	J	3.97	J	5.02	J	0.071	0.056
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	3.87	J	3.86	U	0.11	0.11
TO-15	Trichloroethene	0.37	U	0.0142	U	2.53	U	3.33	U	0.15	0.11
TO-15	1,2-Dibromo-3-chloropropane	2.16	U	0.0832	U	14.79	U	19.47	U	0.15	0.11

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CRD	SF-4CRD	STA-4C-5-DUP	STA-4C-10-DUP	Ratio	Ratio
		ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3	SF/5' SG	SF/10' SG
ASTM 1946	% Helium Trace Gas	NA	NA	0.028	J 0.595		
TO-15 SIM	Chloroform	0.208	0.00801	147.947	E 225.465	E 0.0014	0.00092
TO-15 SIM	Benzene	0.201	0.00774	2.469	7.277	0.081	0.028
TO-15 SIM	Carbon tetrachloride	0.043	U 0.00166	U 4.548	U 6.120	0.0095	0.0070
TO-15 SIM	Trichloroethene	0.037	U 0.00142	U 0.246	U 0.340	U 0.15	0.11
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.101	J 0.00389	J 0.772	J 18.103	0.13	0.0056
		ug/m3	ug/m <sup>2</sup> ,min-1	ug/m3	ug/m3		
ASTM 1946	% Helium Trace Gas	NA	NA	0.028	J 0.595		
TO-15	Acetone	11.73	0.452	234.72	155.28	0.050	0.076
TO-15	2-Butanone	3.33	0.128	101.86	32.64	0.033	0.10
TO-15	Chloroform	0.33	U 0.0127	U 153.94	U 213.93	0.0021	0.0015
TO-15	Benzene	0.27	J 0.0104	J 3.07	J 5.58	J 0.088	0.048
TO-15	Carbon tetrachloride	0.43	U 0.0166	U 3.89	J 4.27	J 0.11	0.10
TO-15	Trichloroethene	0.37	U 0.0142	U 2.46	U 3.40	U 0.15	0.11
TO-15	1,2-Dibromo-3-chloropropane	2.17	U 0.0835	U 14.37	U 19.89	U 0.15	0.11

Table of Compound Ratios.

METHOD	COMPOUND	COMPOUND RATIOS PER LOCATION AND AVERAGE, 5' BLS							
		4N	4S	4E	4W	4C	4CR	4CRD	Average
5' BLS									
TO-15 SIM	Chloroform	0.015		0.014	0.0022	0.0013	0.0044	0.0014	0.0064
TO-15 SIM	Benzene	0.14	0.0080	0.084	0.60	0.045	0.16	0.081	0.16
TO-15 SIM	Carbon tetrachloride								
TO-15 SIM	Trichloroethene								
TO-15 SIM	1,2-Dibromo-3-chloropropane		0.027		0.033				0.030
5' BLS		4N	4S	4E	4W	4C	4CR	4CRD	Average
TO-15	Chloroform								
TO-15	Benzene								
TO-15	Carbon tetrachloride								
TO-15	Trichloroethene								
TO-15	1,2-Dibromo-3-chloropropane								
TO-15	Acetone		0.026	0.021		0.027	0.035	0.050	0.032
TO-15	2-Butanone	1.2	0.019		0.013	0.014	0.032	0.033	0.22

METHOD	COMPOUND	COMPOUND RATIOS PER LOCATION AND AVERAGE, 10' BLS							
		4N	4S	4E	4W	4C	4CR	4CRD	Average
10' BLS									
TO-15 SIM	Chloroform				0.0023	0.00069	0.00077	0.00092	0.0012
TO-15 SIM	Benzene		0.0420	0.0030	0.37	0.016	0.027	0.028	0.081
TO-15 SIM	Carbon tetrachloride								
TO-15 SIM	Trichloroethene								
TO-15 SIM	1,2-Dibromo-3-chloropropane				0.035			0.0056	0.020
10' BLS		4N	4S	4E	4W	4C	4CR	4CRD	Average
TO-15	Chloroform								
TO-15	Benzene								
TO-15	Carbon tetrachloride								
TO-15	Trichloroethene								
TO-15	1,2-Dibromo-3-chloropropane								
TO-15	Acetone	0.025	0.015	0.29		0.017	0.011	0.076	0.072
TO-15	2-Butanone	0.041	0.0082	0.44	0.034	0.013	0.012	0.10	0.093

Table of Compound Ratios.

Summary at 5' BLS

Average Ratio- SF/5' SG	
<b>Chloroform</b>	0.0064
<b>Benzene</b>	0.16
<b>1,2-Dibromo-3-chloropropane</b>	0.063
<b>Acetone</b>	0.032
<b>2-Butanone</b>	0.030

Summary at 10' BLS

Average Ratio- SF/10' SG	
<b>Chloroform</b>	0.0012
<b>Benzene</b>	0.081
<b>1,2-Dibromo-3-chloropropane</b>	0.020
<b>Acetone</b>	0.072
<b>2-Butanone</b>	0.093

Summary per Compound

Summary of Ratios	SF/5' SG	SF/10' SG	5' Ratio/10' Ratio
<b>Chloroform</b>	0.0064	0.0012	5.3
<b>Benzene</b>	0.16	0.081	2.0
<b>1,2-Dibromo-3-chloropropane</b>	0.063	0.020	3.2
<b>Acetone</b>	0.032	0.072	0.44
<b>2-Butanone</b>	0.030	0.093	0.32

## **APPENDIX A**

### **RESULTS OF THE FLUX CHAMBER/SOIL GAS COMPARATIVE STUDY TESTING CONDUCTED IN STUDY AREAS STATION NOS. 3 AND 4**

***CE Schmidt, Ph.D.  
Environmental Consultant***

***TECHNICAL MEMORANDUM***

Results of the Flux Chamber/Soil Gas Comparative Study Testing Conducted  
In Study Areas Station Nos. 3 and 4, Henderson, Nevada

Draft

Prepared For:

Mr. Mark Jones  
ERM-West, Inc.  
2525 Natomas Park Drive  
Sacramento, CA 95833-2933

Prepared By:

Dr. C.E. Schmidt  
Environmental Consultant  
19200 Live Oak Road  
Red Bluff, California 96080

July 2010

TABLE OF CONTENTS

	<u>Page</u>
Executive Summary	1
I. Introduction .....	2
II. Test Methodology .....	8
III. Quality Control .....	9
IV. Results and Discussions .....	13
V. Summary .....	14
References	15

Figure 1- Site Plot Map Showing Study Station Areas

Attachments

- A- Emissions Measurement Data Sheets
- B- Chain of Custody
- C- Lab Reports (electronic only)

## EXECUTIVE SUMMARY

A field study was designed and conducted in order to gather data to compare two approaches for measuring VOC emissions from the land surface - direct measured surface flux data and/or subsurface soil gas data. The study was conducted on two of four selected study areas or stations (Nos. 3 and 4) on the Basic Management, Inc. (BMI) Common Areas (Eastside) in Clark County, Nevada. Field testing was conducted at two of the four Stations as opposed to all four because of incumbent weather conditions which affected sample collection. Field testing was conducted on February 17, 18, and 19, 2010 by Dr. CE Schmidt, Katie Schmidt, and representatives of Geological Environmental Services, Inc. (GES, Inc.). CE Schmidt conducted the flux chamber testing and GES, Inc. conducted the soil gas testing. GES, Inc. also conducted and managed the associated soil boring and soil sampling and analysis activities. Environmental Analytical Services performed the analysis of both the gas-phase flux chamber samples and the soil gas samples.

The comparison study was conducted for project-specific volatile organic compounds (VOCs) in order to achieve the project objective of method evaluation and data comparison. The work was conducted following the work plans titled: Standard Operating Procedures (SOPs) for surface flux chamber (SOP-16) and active soil gas (SOP-37) in the Nevada Division of Environmental Protection (NDEP) approved Basic Remediation Company (BRC) Field Sampling and Standard Operating Procedures (FSSOP; BRC, ERM and MWH 2009), and the Sampling and Analysis Plan (SAP) titled *Sampling and Analysis Plan for Surface Flux Chamber/Soil Gas Comparison, BMI Common Areas (Eastside), Henderson, Nevada; Revision 1*, December 4, 2009 (approved by NDEP on December 19, 2009). Validation of the data has been performed concurrently with this technical memorandum and is provided as a separate deliverable (*Data Validation Summary Report (DVSR)—Surface Flux Chamber/Soil Gas Comparison Study; February 2010 [Dataset 69]*, BRC and ERM 2010).

## I. INTRODUCTION

This technical memorandum describes the field testing that was conducted in order to assess the measured surface concentrations and flux of VOCs at the Eastside property at locations identified as Station Nos. 3 and 4 located in Henderson, Nevada. Area source flux data were collected with the intention of assessing the effect of the surface flux of VOCs from subsurface sources on site. Field testing was conducted by Dr. C.E. Schmidt and a field scientist on February 17 through 19, 2010 with representatives of GES, Inc. Test locations are shown on Figure 1.

The scope of work for this comparison study included the collection of samples using (1) validated USEPA surface emissions isolation flux chamber assessment technology (dynamic flux chamber), (2) regulatory approved soil gas sampling and analysis, and (3) soil boring and soil properties testing. The proposed comparison study included side-by-side testing using these two gas-phase assessment technologies at two of the four study stations; the soil properties testing can support any subsequent modeling and data evaluation aspects of the study.

These station locations are depicted on Figure 1. The station locations were selected to represent an area of interest with relatively uniform groundwater plume concentration and known lithology. As indicated above, these areas are locations with relatively elevated levels of VOCs, particularly chloroform and tetrachloroethylene, in groundwater. The goal of the field program was to gather data that demonstrates the efficacy of these approaches and to do so in a manner that minimizes the variability attributed to spatial and temporal variations.

At each station, a series of surface flux chamber samples, subsurface soil gas samples, and soil samples were collected, as described below.

- **Surface flux Chamber Sampling.** Surface flux chamber testing was performed at the center point of a given station and at four locations in each compass direction spaced 20 ft from the center point (i.e., five separate locations per station; see Figure 1 inset). The center point was sampled with two, side-by-side flux tests (full replicate test), each including a duplicate sample per chamber (nested sample replicates). Therefore, six surface flux samples (nine samples including QA/QC samples, see Table 1 below) were collected at each station. One of the center-point samples was also collected in replicate with a duplicate from the replicate test location. The flux chamber sampling activities consisted of setting up the dynamic flux chamber and equipment at the test location, sealing the chamber on the ground, adding sweep air to the chamber, equilibrating the chamber for five residence times, collecting a VOC sample in a stainless steel canister, and decontaminating the flux chamber prior to moving to another test location.

**Table 1. Sampling Summary for Flux Chamber Testing.**

<b>Sample Type</b>	<b>Number</b>	<b>Comment</b>
Surface Flux Sample- Station #3	6	One center point with a full sample replicate, and four points in each of four directions (N, S, E, W) from center at 20 ft away; 5 samples

Sample Type	Number	Comment
Surface Flux Sample- Station #4	6	One center point with a full sample replicate, and four points in each of four directions (N, S, E, W) from center at 20 ft away; 5 samples
System and Media Blank Sample	1- System 2- Media	Minimum 5% Blank Samples
Replicate Sample	2	Minimum 5% Replicate Samples; duplicate sample (same location)
<b>TOTAL (All Stations)</b>	<b>17</b>	<b>Two of Four Stations Tested (Stations 3 and 4)</b>

- **Soil Gas Sampling.** After the surface flux chamber testing was completed, in the center or near the center of each flux chamber sampling location, a soil gas probe was installed to the depth of 5 ft and (with a separate probe) then to 10 ft bgs and subsurface soil gas samples were collected from the 5 ft bgs and 10 ft bgs (i.e., five sample locations per station). As above, a replicate probe and replicate sample, collected in duplicate, was collected at the center point. Six 5 ft depth and six 10 ft depth soil gas samples were collected at each station (12 samples including QA/QC samples or 14 soil gas samples as described in Table 2.). Again, the replicate test location was collected in duplicate. Soil gas sampling procedures included installing the probes to the desired depth, performing leak check testing, purging the probe according to the probe volume, and collecting a soil gas sample in an evacuated canister following protocols that limit the induced, subsurface pressure and control the sample collection flow rate.

**Table 2. Sampling Summary for Soil Gas Testing.**

Sample Type	Number	Comment
Soil Gas Sample- Station #3	6 - 5' bgs 6 - 10' bgs	One center point with a full sample replicate, and four points in each of four directions (N, S, E, W) from center at 20 ft away; samples at 5 ft bgs and 10 ft bgs
Soil Gas Sample- Station #4	6 - 5' bgs 6 - 10' bgs	One center point with a full sample replicate, and four points in each of four directions (N, S, E, W) from center at 20 ft away; samples at 5 ft bgs and 10 ft bgs
System or Media Blank Sample	2	Minimum 5% Blank Samples
Replicate Sample	4	Minimum 5% Replicate Samples; duplicate sample (same location)
Resampling Event	1	STA-4C-5B
<b>TOTAL (All Stations)</b>	<b>31</b>	<b>Two of Four Stations Tested (Stations 3 and 4)</b>

- **Soil Profiling and Sampling.** After the surface flux and soil gas testing was completed, a soil boring was advanced at the center point of each of the two test locations to characterize lithologic conditions at each station. The soil column was continuously logged to the groundwater interface using standard geotechnical techniques for collection of soil samples for analyses of soil parameters. Samples were retained in 2.5 x 6 inch stainless steel sleeves

and 4 sleeves were submitted for each sample interval of every two ft (2") down to a depth of 10 ft (note- the lithology was logged to groundwater but the soil parameter sample collection and analysis occurred to a depth of the deepest soil gas sample). These sample depth intervals at each boring were 0 to 2 ft bgs, 2 to 4 ft bgs, 4 to 6 ft bgs, 6 to 8 ft bgs, and 8 to 10 ft bgs.

Field activities were conducted in accordance with applicable standard operating procedures (SOPs; BRC, ERM and MWH 2008), including but not limited to the following:

- SOP-1 – *Drilling Methods*
- SOP-7 – *Soil Sampling*
- SOP-16 – *Flux Chamber Source Testing*
- SOP-17 – *Soil Logging*
- SOP-37 – *Active Soil Gas Investigation*

The BRC Quality Assurance Project Plan (QAPP; BRC and ERM 2009) and Health and Safety Plan (HASP; BRC and MWH 2005) prepared for the Eastside property were followed for the sampling event described above.

### **Laboratory Analysis**

The flux samples and soil gas samples collected as described above were analyzed by a certified analytical laboratory using USEPA Method TO-15 (GC/MS) using Full Scan Mode and Selective Ion Mode for a short list of site-related compounds, as presented in Table 3. All canisters used were ‘clean’ certified.

**Table 3. VOC Analyte List and Reporting Limits**

Compound	CAS Number	MDL ppbv	RL ppbv	MDL $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$
<b>List of Compounds for USEPA Method TO-15 Full Scan Mode Operation and MDLs</b>					
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.51	0.72	3.62
1,1,1-Trichloroethane	71-55-6	0.1	0.52	0.58	2.89
1,1,2,2-Tetrachloroethane	79-34-5	0.1	0.52	0.73	3.65
1,1,2-Trichloroethane	79-00-5	0.1	0.51	0.57	2.86
1,1-Dichloroethane	75-34-3	0.1	0.52	0.43	2.15
1,1-Dichloroethene	75-35-4	0.1	0.52	0.42	2.13
1,1-Dichloropropene	563-58-6	0.1	0.49	0.46	2.3
1,2,3-Trichloropropane	96-18-4	0.11	0.55	0.68	3.39
1,2,4-Trichlorobenzene	120-82-1	0.1	0.52	0.79	3.94
1,2,4-Trimethylbenzene	95-63-6	0.1	0.52	0.52	2.61
1,2-Dibromo-3-chloropropane	96-12-8	0.22	1.1	2.2	10.98
1,2-Dibromoethane	106-93-4	0.1	0.52	0.82	4.09
1,2-Dichlorobenzene	95-50-1	0.1	0.52	0.64	3.2
1,2-Dichloroethane	107-06-2	0.1	0.52	0.43	2.15
1,2-Dichloropropane	78-87-5	0.1	0.52	0.49	2.46
1,3,5-Trimethylbenzene	108-67-8	0.1	0.52	0.53	2.64

**Table 3. VOC Analyte List and Reporting Limits**

Compound	CAS Number	MDL ppbv	RL ppbv	MDL $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$
<b>List of Compounds for USEPA Method TO-15 Full Scan Mode Operation and MDLs</b>					
1,3-Dichlorobenzene	541-73-1	0.1	0.52	0.64	3.2
1,3-Dichloropropane	142-28-9	0.11	0.54	0.52	2.58
1,4-Dichlorobenzene	106-46-7	0.1	0.52	0.64	3.2
1,4-Dioxane	123-91-1	0.09	0.44	0.33	1.64
2,2-Dichloropropane	594-20-7	0.11	0.53	0.5	2.53
2-Butanone	78-93-3	0.09	0.43	0.26	1.31
2-Hexanone	591-78-6	0.09	0.44	0.37	1.86
Acetone	67-64-1	0.09	0.45	0.22	1.1
Acetonitrile	75-05-8	0.22	1.12	0.48	2.39
Benzene	71-43-2	0.1	0.52	0.34	1.7
Benzyl chloride	100-44-7	0.09	0.45	0.48	2.41
Bromochloromethane	74-97-5	0.1	0.51	0.55	2.76
Bromodichloromethane	75-27-4	0.08	0.4	0.55	2.77
Bromoform	75-25-2	0.09	0.47	0.99	4.96
Bromomethane	74-83-9	0.1	0.51	0.41	2.04
Carbon disulfide	75-15-0	0.09	0.45	0.29	1.45
Carbon tetrachloride	56-23-5	0.1	0.52	0.67	3.38
Chlorobenzene	108-90-7	0.1	0.52	0.5	2.48
Chloroethane	75-00-3	0.1	0.51	0.28	1.39
Chloroform	67-66-3	0.1	0.52	0.52	2.59
Chloromethane	74-87-3	0.1	0.51	0.22	1.09
cis-1,2-Dichloroethene	156-59-2	0.1	0.52	0.42	2.11
cis-1,3-Dichloropropene	10061-01-5	0.1	0.52	0.48	2.41
Dibromochloromethane	124-48-1	0.09	0.44	0.77	3.87
Dibromomethane	74-95-3	0.11	0.55	0.97	4.84
Dichlorodifluoromethane	75-71-8	0.1	0.51	0.52	2.61
Dichloromethane	75-09-2	0.1	0.52	0.37	1.86
Ethanol	64-17-5	0.22	1.12	0.44	2.18
Ethylbenzene	100-41-4	0.1	0.52	0.46	2.33
Freon 113	76-13-1	0.1	0.52	0.81	4.07
Hexachlorobutadiene	87-68-3	0.1	0.52	1.14	5.68
Isobutyl alcohol	78-83-1	0.23	1.13	0.84	4.21
Isopropylbenzene	98-82-8	0.11	0.57	0.58	2.89
Isopropyltoluene	99-87-6	0.11	0.55	0.62	3.12
m & p-Xylene	108-38-3	0.21	1.03	0.92	4.61
Methyl iodide	4227-95-6	0.19	0.94	1.13	5.67
Methyl Isobutyl Ketone	108-10-1	0.09	0.46	0.38	1.95
Methyl tert butyl ether	1634-04-4	0.08	0.39	0.29	1.45
Naphthalene	91-20-3	0.22	1.09	1.19	5.9
n-Butylbenzene	104-51-8	0.1	0.52	0.59	2.95
n-Heptane	142-82-5	0.08	0.42	0.35	1.78
n-Propylbenzene	103-65-1	0.11	0.54	0.55	2.74
o-Xylene	95-47-6	0.1	0.52	0.46	2.31
sec-Butylbenzene	135-98-8	0.11	0.52	0.59	2.95

**Table 3. VOC Analyte List and Reporting Limits**

Compound	CAS Number	MDL ppbv	RL ppbv	MDL $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$
<b>List of Compounds for USEPA Method TO-15 Full Scan Mode Operation and MDLs</b>					
Styrene	100-42-5	0.1	0.52	0.45	2.26
tert-Butylbenzene	98-06-6	0.11	0.52	0.59	2.85
Tetrachloroethene	127-18-4	0.1	0.52	0.72	3.61
Toluene	108-88-3	0.1	0.52	0.4	2
trans-1,2-Dichloroethene	156-60-5	0.09	0.44	0.36	1.8
trans-1,3-Dichloropropene	10061-02-6	0.1	0.52	0.48	2.41
Trichloroethene	79-01-6	0.1	0.52	0.57	2.85
Trichlorofluoromethane	75-69-4	0.1	0.51	0.59	2.95
Vinyl acetate	108-05-4	0.09	0.43	0.31	1.56
Vinyl chloride	75-01-4	0.1	0.51	0.27	1.35
<b>List of Compounds for USEPA Method TO-15 Selective Ion Mode (SIM) Operation and MDLs</b>					
1,1,1,2-Tetrachloroethane	630-20-6	0.005	0.026	0.035	0.18
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.026	0.035	0.18
1,1,2-Trichloroethane	79-00-5	0.005	0.026	0.028	0.14
1,2,3-Trichloropropane	96-18-4	0.005	0.026	0.031	0.16
1,2-Dibromo-3-chloropropane	96-12-8	0.01	0.026	0.098	0.26
1,2-Dibromoethane	106-93-4	0.005	0.026	0.039	0.2
1,2-Dichlorobenzene	95-50-1	0.005	0.026	0.031	0.16
1,2-Dichloroethane	107-06-2	0.005	0.026	0.021	0.11
1,2-Dichloropropane	78-87-5	0.005	0.026	0.024	0.12
1,3-Dichlorobenzene	541-73-1	0.005	0.026	0.031	0.16
1,4-Dichlorobenzene	106-46-7	0.005	0.026	0.031	0.16
Benzene	71-43-2	0.005	0.026	0.016	0.085
Benzyl chloride	100-44-7	0.005	0.026	0.026	0.14
Bromodichloromethane	75-27-4	0.005	0.026	0.034	0.18
Carbon tetrachloride	56-23-5	0.005	0.026	0.032	0.17
Chloroform	67-66-3	0.005	0.026	0.025	0.13
Dibromochloromethane	124-48-1	0.005	0.026	0.043	0.23
Hexachlorobutadiene	87-68-3	0.01	0.026	0.108	0.28
Naphthalene	91-20-3	0.01	0.026	0.534	0.14
Tetrachloroethene	127-18-4	0.005	0.026	0.035	0.18
Trichloroethene	79-01-6	0.005	0.026	0.027	0.14
Vinyl chloride	75-01-4	0.005	0.026	0.013	0.068

MDL - Method detection limit

RL - Reporting limit

ppbv - Parts per billion by volume

$\mu\text{g}/\text{m}^3$  - microgram per cubic meter

The soil samples were analyzed by a Nevada-certified analytical laboratory for the analyses and soil parameters listed below.

**Table 4. Soil Parameter Analyses**

ASTM D2937/ MOSA1Ch .13	Dry bulk density
ASTM D2435/ MOSA1Ch .18	Total porosity
ASTM D5084	Soil permeability/saturated hydraulic cond.
ASTM D854	Specific gravity of soils
ASTM D2216/D4643/D2974	Volumetric water content
ASTM D4404	Effective porosity
ASTM D2434	Air permeability
ASTM D422 and ASTM C117	Grain size distribution
EPA 415.1/ASTM 2947	Fractional organic carbon content

This memorandum includes a discussion of the testing methodology, quality control procedures, and the results obtained. The soil parameter data and all other data reporting, data evaluation, and comparative analysis are provided in the DVSR (BRC and ERM 2010).

## II. TEST METHODOLOGY

Testing for surface VOC flux for the project-specific target list was conducted using the US EPA recommended Surface Isolation Flux Chamber (US EPA. Radian Corporation, February 1986). The operation of the surface flux chamber is given below:

1. The flux chamber equipment was decontaminated by washing with Alconox soap and water and rinsing with water prior to the equipment use. New sample lines were prepared and used for the application.
2. Flux chamber, sweep air, sample collection equipment, and field documents were located on-site. Site test locations were identified and recorded on a site plot map.
3. The site information, location information, equipment information, date, and proposed time of testing were documented on the Emissions Measurement Field Data Sheet (see Attachment A).
4. The exact test location was selected and the lower lip of the chamber was placed about 1/4" into the land surface sealing the chamber for open soil surface testing. Thermocouples were placed in order to monitor surface/air temperatures outside of the chamber.
5. The sweep air flow rate was initiated and the rotometer, which stabilizes the flow rate, was set at 5.0 liters per minute. A constant sweep air flow rate was maintained throughout the measurement for each sampling location.
6. Flux chamber data were recorded every residence interval (6 minutes) for five intervals, or 30 minutes.
7. At steady-state (assumed to be greater than 5 residence intervals), the sample collection was performed by interfacing a canister to the purged, sample line and filling a canister with sample gas.
8. After sample collection, all field data were documented on the data sheet.
9. After sampling, the flux measurement was discontinued by shutting off the sweep air, removing the chamber, and securing the equipment. The chamber was cleaned by dry wipe with a clean paper towel and the sample lines were purged with UHP air.
10. Sampling locations were recorded on the field data sheet. The equipment was then relocated to the next test location and steps 1) through 9) were repeated.

As noted above, soil gas sampling was conducted in accordance with SOP-37 (Active Soil Gas Investigation; BRC, ERM and MWH 2008).

### III. QUALITY CONTROL

Control procedures that were used to assure that data of sufficient quality resulted from the flux chamber study are listed and described below. The application and frequency of these procedures were developed to meet the program data quality objectives as described in the project work plan. Project QC results are presented and discussed for flux chamber testing and soil gas testing separately; note that they are reported as individual sample delivery groups (SDG) by the laboratory.

Field Documentation -- A field notebook containing data forms, including sample chain-of-custody (COC) forms, was maintained for the testing program. Attachment A contains the Emission Measurement Data Sheets.

Chain-of-Custody -- COC forms were not used for field data collection. Field data were recorded on the Flux Chamber Data Forms provided in Attachment A.

#### **USEPA Method TO-15 GC/MS; Full Scan Analysis**

Laboratory Control Spike Recovery Analysis and Duplicate – Eleven control spike samples were analyzed using a standard containing selected study compounds (9 spike samples with 17 study compounds and 2 spike samples with 5 study compounds). All spike compounds were reported for all spike samples within the QC criteria of 70%-to-130% except for two of the spikes that had one compound, 1,2-dibromoethane, exceeding criteria at 138% recovery. These data indicate acceptable method performance.

These samples were also analyzed in duplicate, and similar results were observed. All duplicate analyses showed spike samples within the QC criteria except one compound in one duplicate spike sample (1,2-dibromomethane, 138% recovery) and two compounds in another duplicate spike sample (1,2-dibromomethane, 133% recovery; and chlorobenzene, 138% recovery). These data represent acceptable method performance.

Laboratory Duplicate QC Sample – Eleven laboratory control samples were analyzed in duplicate and all data were found within the precision criteria of 25 relative percent difference (RPD), with the exception of one compound, trichloroethene at 27 RPD in one duplicate QC sample. These data indicate acceptable method performance.

Laboratory Method Blank – Eleven laboratory method blank samples were analyzed and five study compounds were reported above method detection limits and one compound was reported above reporting limits. The following compounds were detected in the lab blanks sample sets in one or more samples (highest detection reported):

Acetone	0.62 ug/m <sup>3</sup> (J)	MDL 0.14 ug/m <sup>3</sup>
Carbon Disulfide	0.87 ug/m <sup>3</sup>	MDL 0.14 ug/m <sup>3</sup>
2-Butanone	0.14 ug/m <sup>3</sup> (J)	MDL 0.14 ug/m <sup>3</sup>
Benzene	0.34 ug/m <sup>3</sup> (J)	MDL 0.17 ug/m <sup>3</sup>
Carbon Tetrachloride	1.40 ug/m <sup>3</sup> (J)	MDL 0.33 ug/m <sup>3</sup>

All other compounds were non-detect. It is common to have low level detections for this method operated at low detection levels near the method detection limit. These low level detections did not affect the sample data quality. These data indicate acceptable method performance.

**Media Sample Blank** – Two media blank samples were collected for the flux chamber testing and two media blank samples were collected for the soil gas testing. For all media blank samples, the media blank was collected by filling a canister sample with high purity air and submitting the sample blind for analysis. The compounds detected in these four media blank samples above reporting limits are:

Chloromethane 0.76 ug/m<sup>3</sup>  
Methyl Iodide 6.16 ug/m<sup>3</sup>  
2-Butanone 0.24 ug/m<sup>3</sup>  
Ethanol 2.27 ug/m<sup>3</sup>  
Acetone 7.15 ug/m<sup>3</sup>  
Bromochloromethane 2.25 ug/m<sup>3</sup>

Low levels of ubiquitous compounds are commonly detected method detection limits, and these data indicate acceptable method performance. However, these detections, found in one or more media blank samples (highest detection reported) are higher than typical, and can be baseline subtracted from the data set or include a data flag for future data use.

**System Sample Blank** – Two system blank samples were collected by placing the flux chamber on a sheet of clean Teflon, operating the chamber as if a field sample were being collected, and collecting a canister sample for analysis submitted blind to the laboratory. Two compounds, acetone at 5.46 ug/m<sup>3</sup> and 2-butanone at 2.08 ug/m<sup>3</sup>, were detected in at least one of the two system blank samples above the reporting limits. Low levels of ubiquitous compounds are commonly detected method detection limits, and these data indicate acceptable method performance.

**Field Replicate/Duplicate QC Sample** – Two field replicate samples and two field duplicate samples (duplicate of the replicate sample) were collected and analyzed in order to assess repeatability and precision for the flux chamber testing. Four field replicate samples and four field duplicate samples (duplicate of the replicate sample) were collected and analyzed in order to assess repeatability and precision for the soil gas testing. Strictly speaking, there is no criteria for repeatability since the measurements are taken side by side and can have spatial variability. These data are reported in the data Tables 2A and 2B for evaluation. The precision criteria for field replicate samples is 50 relative percent difference (RPD). For the two flux chamber samples, all compound pairs above reporting limits (RL) were within the QC criteria, and for the soil gas samples, all the compound pairs above RL were within the QC criteria in two of the four samples; the other two soil gas duplicate samples each had two compound sample pairs exceeding criteria. With so few compounds detected above the reporting limit, it is difficult to report precision for this data set. It should be noted that with so few detections above the reporting limit and these low levels of detection, poor precision in terms of meeting the QC criteria near the method detection limit is expected. Further, acceptable precision is typically

more difficult to obtain with soil gas duplicate sampling activities. As such, these data indicate acceptable method performance.

#### **USEPA Method TO-15 GC/MS; Selective Ion Mode Analysis**

Laboratory Control Spike Recovery Analysis and Duplicate – Ten control spike samples were analyzed using a standard containing selected study compounds (10 study compounds). All spike compounds were reported for all spike samples within the QC criteria of 70%-to-130% except for two of the spikes that had one compound, trichloroethene exceeding criteria at 131% recovery in one sample and 1,2-dibromoethane in two samples at a maximum exceedance of 65% recovery. These data indicate acceptable method performance.

These samples were also analyzed in duplicate, and similar results were observed. All duplicate analysis showed spike samples within the QC criteria except one compound in four duplicate spike samples, 1,2-Dibromomethane, at a maximum exceedance of criteria of 65% recovery. These data represent acceptable method performance.

Laboratory Duplicate QC Sample – Ten laboratory control samples were analyzed in duplicate and all data were found within the precision criteria of 25 relative percent difference (RPD) except for one compound in one sample, vinyl chloride at 30 RPD. These data indicate acceptable method performance.

Laboratory Method Blank – Ten laboratory method blank samples were analyzed and one compound was detected above reporting limits, and two above method detection limits as follows:

1,2-Dibromoethane	0.0332 ug/m <sup>3</sup>	(MDL 0.061 ug/m <sup>3</sup> )
Dibromodichloromethane	0.218 ug/m <sup>3</sup> (J)	(MDL 0.038 ug/m <sup>3</sup> )
Hexachlorobutadiene	0.501 ug/m <sup>3</sup> (J)	(MDL 0.067 ug/m <sup>3</sup> )

These data indicate acceptable method performance.

Media Sample Blank – Two media blank samples were collected for the flux chamber testing and two media blank samples were collected for the soil gas testing. For all media blank samples, the media blank was collected by filling a canister sample with high purity air and submitting the sample blind for analysis. The compounds detected in these four media blank samples above reporting limits are:

Benzene 0.344 ug/m<sup>3</sup> (highest level, found in two of four)  
1,2-Dibromo-3-chloropropene 0.558 ug/m<sup>3</sup>  
Naphthalene 0.50 ug/m<sup>3</sup>

These data indicate acceptable method performance.

System Sample Blank – Two system blank samples were collected by placing the flux chamber on a sheet of clean Teflon, operating the chamber as if a field sample were being collected, and collecting a canister sample for analysis submitted blind to the laboratory. Two compounds

were detected in above the reporting limits; benzene at 0.117 ug/m<sup>3</sup> and naphthalene at 0.55 ug/m<sup>3</sup>. These data indicate acceptable method performance.

**Field Replicate QC Sample** – Two field replicate samples and two field duplicate samples (duplicate of the replicate sample) were collected and analyzed in order to assess repeatability and precision for the flux chamber testing. Four field replicate samples and four field duplicate samples (duplicate of the replicate sample) were collected and analyzed in order to assess repeatability and precision for the soil gas testing. Strictly speaking, there is no criteria for repeatability since the measurements are taken side by side and can have spatial variability. These data are reported in the data Tables 2A and 2B for evaluation. The precision criteria for field duplicate samples is 50 relative percent difference (RPD). For the two flux chamber samples, all compounds pairs above reporting limits (RL) were within the QC criteria, and for the soil gas samples, all the compound pairs above RL were within the QC criteria except one compound pair in all four duplicate samples and two compound pairs in one of the soil gas sample pairs. With so few compounds detected above the reporting limit, it is difficult to report precision for this data set. It should be noted that with so few detections above the reporting limit and these low levels of detection, poor precision in terms of meeting the QC criteria near the method detection limit is expected. Further, acceptable precision is typically more difficult to obtain with soil gas duplicate sampling activities. As such, these data indicate acceptable method performance.

#### **ASTM D 1946; GC/TCD For Helium Analysis**

**Laboratory Control Spike Recovery Analysis and Duplicate** – One control spike sample was analyzed using a standard containing helium; the spike recovery was 112% (QC criteria  $\pm 30\%$ ). These data indicate acceptable method performance. This samples were also analyzed in duplicate, and a similar result was observed. The duplicate spike recovery was 104%. These data represent acceptable method performance.

**Laboratory Duplicate QC Sample** – One laboratory control sample was analyzed in duplicate, and the RPD for the duplicate sample was 8. These data indicate acceptable method performance.

**Media Sample Blank** – Two media blank samples were collected for the soil gas testing. For all media blank samples, the media blank was collected by filling a canister sample with high purity air and submitting the sample blind for analysis. Helium was not detected in the media blank samples (MDL of 0.02%). These data indicate acceptable method performance.

**Field Replicate QC Sample** – Four field replicate samples and four field duplicate samples (duplicate of the replicate sample) were collected and analyzed in order to assess repeatability and precision for the soil gas testing. Strictly speaking, there is no criteria for repeatability since the measurements are taken side by side and can have spatial variability. These data are reported in the data Tables 2A and 2B for evaluation. The precision criteria for field duplicate samples is 50 relative percent difference (RPD). The compounds pairs for the helium analysis were within the QC criteria in three of the four samples, and exceeded the precision criteria in one of the four samples. These data indicate acceptable method performance.

#### **IV. RESULTS AND DISCUSSIONS**

Field sample collection information is provided in Table 1. QC data for TO-15 full scan mode operation and TO-15 SIM are presented in Tables 2A and 2B. Both system blank data and precision data are reported. Table 2A reports the field QC data for flux chamber sampling and Table 2B reports the field QC data for soil gas sampling. Open soil flux data for TO-15 SIM and full scan mode operation are presented in the Table 3 series where flux data and soil gas data are provided per test location per station. Open soil flux data are reported in flux units per square meter of exposed surface ( $\mu\text{g}/\text{m}^2,\text{min}-1$ ). All data are qualified by the laboratory as below method detection limit ('U' and reported as non-detect; ND), reported as a 'J' flag value or above method detection limits but below reporting limits, or above the reporting limit (data shown without a qualifier). Further, all data found above the reporting limits are shown in bold print. No data or background subtraction has been performed. Laboratory QC data are also provided in the appended tables. Additional lab QC summary data are also provided in the data tables.

Surface flux data for a VOCs in the dynamic USEPA flux chamber are calculated using measured target compound concentrations and flux chamber operating parameter data (sweep air flow rate of 5.0 liters per minute [ $\text{L}/\text{min}$ ], surface area 0.13 square meters [ $\text{m}^2$ ]). The site emissions can be calculated by multiplying the flux by the surface area of the source. The flux is calculated from the sweep air flow rate Q (cubic meters per minute [ $\text{m}^3/\text{min}$ ]), the species concentration  $Y_i$  (micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ]), and exposure to the chamber surface area (square meters [ $\text{m}^2$ ]), as follows:

$$F_i \text{ VOC} = \frac{(Q) (Y_i)}{(A)}$$

Quality control field blank data and background data were collected and these data were used to qualify the field data. A review of the project QC data indicated acceptable laboratory and method performance.

Note that in several instances the soil gas data collected for Station No.3 did not meet the soil gas sampling criteria regarding helium leak check (e.g., less than 3% helium detected in the canister sample). The soil gas sampling protocol includes encasing the soil gas sampling apparatus and soil gas probe in a glove box flooded with 100% helium trace gas, and vacuum leaks in the soil gas probe seal and sampling line can be detected by analyzing the canister sample for helium. Equipment failures encountered during the sample collection effort for Station No.3 were the cause of this sampling limitation. As a result soil gas data and thus the comparative data analysis should only consider data collected from Station No.4. Only one soil gas sample from the sample collection conducted in Station No.4 exceeded criteria, and soil gas data representing Station No.4 are considered acceptable.

## V. SUMMARY

Surface flux measurements were made at multiple locations per two study areas known as Station Nos. 3 and 4 for the purpose of providing data that can be used to compare emission assessment data from two measurement technologies. Testing was conducted using the USEPA flux chamber technology and soil gas testing following accepted scientific methodologies. The following is a summary of activities and results associated with this objective:

- Surface flux measurements and soil gas measurements of study compounds were measured at multiple outdoor, open soil locations on the study property using the USEPA recommended surface flux chamber technology and regulatory-approved soil gas testing methodology. These technologies quantitatively measures vapor fluxes at the land surface or data to estimate vapor flux at the land surface due to the presence of subsurface VOCs.
- Laboratory and field quality control data indicated acceptable sampling method performance. Data above the reporting limits are indicated as those without a 'J' flag as provided on the laboratory sheets and summary tables (J flag values are above method detection but below reporting limit).
- These data sets (open soil flux and soil gas concentration data per project study compounds) can be used to estimate surface emissions of study compounds from the test areas. The reader is free to choose either of the TO-15 full scan or SIM data when common compounds are reported for the same sample; both data are valid.

## REFERENCES

U.S. Environmental Protection Agency (USEPA). 1986. Measurement of Gaseous Emission Rates from Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Radian Corporation, February, 1986.

Basic Remediation Company (BRC). 2009. Sampling and Analysis Plan for Surface Flux Chamber/Soil Gas Comparison, BMI Common Areas (Eastside), Henderson, Nevada; Revision 1. December 4.

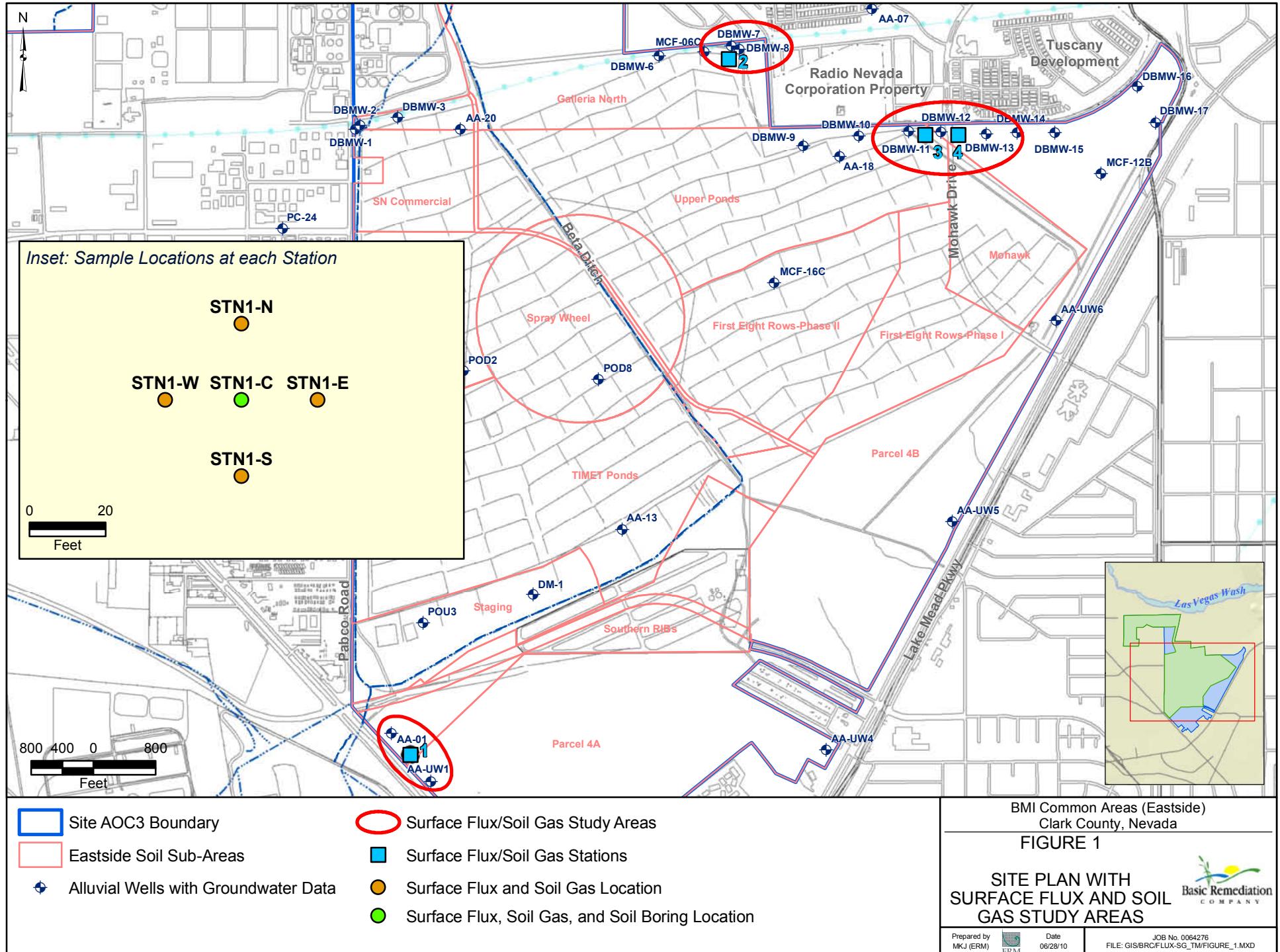
Basic Remediation Company (BRC) and ERM. 2008. Data Validation Summary Report. Mohawk Sub-Area Soil Investigation. May-July 2008 (Dataset 52). BMI Common Areas (Eastside), Clark County, Nevada. Revision 0. October.

Basic Remediation Company (BRC), ERM, and MWH. 2009. BRC Field Sampling and Standard operating Procedures. BMI Common Areas, Clark County, Nevada. December.

Basic Remediation Company (BRC) and MWH. 2005. BRC Health and Safety Plan, BMI Common Areas, Clark County, Nevada. October.

*CE Schmidt, Ph.D.  
Environmental Consultant*

## FIGURES



*CE Schmidt, Ph.D.  
Environmental Consultant*

## TABLES

Table 1. Summary of Field Data Collection- Surface Flux and Soil Gas Technology Comparison-Stations 3 and 4.

DATE	TIME	SOURCE/ID	VOC CAN	IN SURF	IN AIR	OUT SURF	OUT AIR	BAR P ("Hg)	SOIL GAS 5' DEPTH BLS (ft)	SOIL GAS 10' DEPTH BLS (ft)	COMMENT
		LOCATION	FLUX ID	°F	°F	°F	°F				
2/17/2010	745	Station #3	SF-3S	53	53	51	52	NA	STA-3S-5	STA-3S-10	
2/17/2010	745	Station #3	SF-3W	53	53	50	53	NA	STA-3W-5	STA-3W-10	
2/17/2010	836	Station #3	SF-3C	59	66	61	58	NA	STA-3C-5	STA-3C-10	
2/17/2010	836	Station #3	SF-3CR	63	67	65	59	NA	STA-3CR-5	STA-3CR-10	Replicate flux and probe sample
2/17/2010	836	Station #3	SF-3CRD	63	67	65	59	NA	STA-3CRD-5	STR-3CRD-10	Duplicate sample collected from replicate flux measurement and probe
2/17/2010	1419	Station #3	SF-MB-01	NA	NA	NA	NA	NA	NA	NA	UHP air collected in a canister
2/17/2010	1730	Station #3	SF-SB-01	NA	NA	NA	NA	NA	NA	NA	Flux chamber 'B' system blank on teflon indoors
2/17/2010	1730	Station #3	SF-SB-02	NA	NA	NA	NA	NA	NA	NA	Flux chamber 'G' system blank on teflon indoors
									STR-3C-Blank		Soil gas media blank; UHP air in canister
2/18/2010	842	Station #3	SF-3E	59	64	64	57	NA	STA-3E-5	STA-3E-10	
2/18/2010	842	Station #3	SF-3N	59	64	59	57	28.5	STA-3N-5	STA-3N-10	
2/18/2010	1217	Station #4	SF-4E	109	83	90	65	28.0	STA-4E-5	STA-4E-10	
2/18/2010	1217	Station #4	SF-4N	91	86	88	66	28.2	STA-4N-5	STA-4N-10	
2/18/2010	1302	Station #4	SF-4C	85	86	85	69	28.1	STA-4C-5	STA-4C-10	STA-4C-5B is probably a second boring (refusal or sampling do-over)
2/18/2010	1302	Station #4	SF-4CR	98	85	90	68	28.1	STA-4CR-5	STA-4CR-10	
2/18/2010	1302	Station #4	SF-4CRD	98	85	90	68	28.1	STA-4CRD-5	STA-4CRD-10	
2/18/2010	1411	Station #4	SF-MB-02	NA	NA	NA	NA	NA	STA-4C-Blank		Media/system blank samples, surface flux and soil gas; UHP air in canister
2/18/2010	1119	Station #4	SF-4W	74	72	71	67	28.1	STA-4W-5	STA-4W-10	
2/18/2010	1119	Station #4	SF-4S	71	71	62	68	28.1	STA-4S-5	STA-4S-10	

R- Replicate sample

VOC- Volatile organic compound

NA- Not analyzed

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean	RPD				
		SF-3C											
		ug/m <sup>3</sup>											
ASTM 1946	% Helium Trace Gas	NA	NA			NA	NA						
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.046	U	0.045	U	0.046	2.2	0.045	U	0.046	-2.2		
TO-15 SIM	1,3-Dichlorobenzene	0.040	U	0.039	U	0.040	2.5	0.039	U	0.041	U	0.040	-5.0
TO-15 SIM	Benzyl chloride	0.019	U	0.018	U	0.019	5.4	0.018	U	0.019	U	0.019	-5.4
TO-15 SIM	1,4-Dichlorobenzene	0.040	U	0.039	U	0.040	2.5	0.039	U	0.041	U	0.040	-5.0
TO-15 SIM	1,2-Dichlorobenzene	0.040	J	0.038	U	0.039	5.1	0.038	U	0.041	J	0.040	-7.6
TO-15 SIM	Hexachlorobutadiene	0.093	J	0.092	J	0.093	1.1	0.092	J	0.104	J	0.098	-12
TO-15 SIM	Naphthalene	0.509	B	0.514	B	0.51	-1.0	0.514	B	0.652	B	0.58	-24
TO-15 SIM	1,2,3-Trichloropropane	0.036	U	0.035	U	0.036	2.8	0.035	U	0.059	J	0.047	-51
TO-15 SIM	Vinyl chloride	0.017	U	0.017	U	0.017	0.0	0.017	U	0.018	U	0.018	-5.7
TO-15 SIM	Dichloromethane	0.024	U	0.024	U	0.024	0.0	0.024	U	0.028	J	0.026	-15
TO-15 SIM	Chloroform	1.451		1.119		1.3	26	1.119		1.137		1.1	-1.6
TO-15 SIM	1,2-Dichloroethane	0.027	U	0.027	U	0.027	0.0	0.027	U	0.028	U	0.028	-3.6
TO-15 SIM	Benzene	0.178	J	0.153	J	0.17	15	0.153	J	0.209	J	0.18	-31
TO-15 SIM	Carbon tetrachloride	0.068	J	0.050	J	0.059	31	0.050	J	0.042	U	0.046	17
TO-15 SIM	1,2-Dichloropropane	0.031	U	0.031	U	0.031	0.0	0.031	U	0.031	U	0.031	0.0
TO-15 SIM	Trichloroethene	0.036	U	0.036	U	0.036	0.0	0.036	U	0.037	U	0.037	-2.7
TO-15 SIM	Bromodichloromethane	0.016	U	0.016	U	0.016	0.0	0.016	U	0.016	U	0.016	0.0
TO-15 SIM	1,2-Dibromoethane	0.052	U	0.052	U	0.052	0.0	0.052	U	0.053	U	0.053	-1.9
TO-15 SIM	1,1,2-Trichloroethane	0.036	U	0.036	U	0.036	0.0	0.036	U	0.037	U	0.037	-2.7
TO-15 SIM	Tetrachloroethene	0.045	U	0.045	U	0.045	0.0	0.045	U	0.046	U	0.046	-2.2
TO-15 SIM	Dibromochloromethane	0.041	U	0.041	U	0.041	0.0	0.041	U	0.041	U	0.041	0.0
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.666		0.739		0.70	-10	0.739		0.802		0.77	-8.2
		ug/m <sup>3</sup>		ug/m <sup>3</sup>				ug/m <sup>3</sup>		ug/m <sup>3</sup>			
ASTM 1946	% Helium Trace Gas	NA	NA			NA		NA					
TO-15	Dichlorodifluoromethane	0.34	U	0.34	U	0.34	0.0	0.34	U	0.34	U	0.34	0.0
TO-15	Chloromethane	0.14	U	0.14	U	0.14	0.0	0.14	U	0.14	U	0.14	0.0
TO-15	Vinyl chloride	0.17	U	0.17	U	0.17	0.0	0.17	U	0.18	U	0.18	-5.7
TO-15	Bromomethane	0.26	U	0.26	U	0.26	0.0	0.26	U	0.27	U	0.27	-3.8
TO-15	Chloroethane	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	U	0.18	0.0
TO-15	Ethanol	1.38	J	0.43	U	0.91	105	0.43	U	2.14	J	1.3	-133
TO-15	Trichlorofluoromethane	0.38	U	0.38	U	0.38	0.0	0.38	U	0.39	U	0.39	-2.6
TO-15	Acetonitrile	0.22	U	0.22	U	0.22	0.0	0.22	U	0.23	U	0.23	-4.4
TO-15	Acetone	6.19		14.24		10	-79	14.24		13.93		14	2.2
TO-15	Methyl iodide	0.11	U	0.11	U	0.11	0.0	0.11	U	0.12	U	0.12	-8.7

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean	RPD				
		SF-3C											
		ug/m <sup>3</sup>											
TO-15	1,1-Dichloroethene	0.26	U	0.26	U	0.26	0.0	0.26	U	0.26	0.0		
TO-15	Freon 113	0.51	U	0.51	U	0.51	0.0	0.51	U	0.52	U	0.52	-1.9
TO-15	Dichloromethane	0.24	U	0.24	U	0.24	0.0	0.24	U	0.24	U	0.24	0.0
TO-15	Carbon disulfide	0.29	J	0.17	U	0.23	52	0.17	U	0.44	J	0.31	-89
TO-15	trans-1,2-Dichloroethene	0.17	U	0.17	U	0.17	0.0	0.17	U	0.17	U	0.17	0.0
TO-15	Methyl tert butyl ether	0.16	U	0.16	U	0.16	0.0	0.16	U	0.16	U	0.16	0.0
TO-15	1,1-Dichloroethane	0.27	U	0.27	U	0.27	0.0	0.27	U	0.27	U	0.27	0.0
TO-15	Vinyl acetate	0.19	U	0.19	U	0.19	0.0	0.19	U	0.19	U	0.19	0.0
TO-15	2-Butanone	1.65		7.56		4.6	-128	7.56		5.35		6.5	34
TO-15	Bromochloromethane	0.17	U	0.17	U	0.17	0.0	0.17	U	0.17	U	0.17	0.0
TO-15	Isobutyl alcohol	0.15	U	0.15	U	0.15	0.0	0.15	U	0.15	U	0.15	0.0
TO-15	cis-1,2-Dichloroethene	0.27	U	0.27	U	0.27	0.0	0.27	U	0.27	U	0.27	0.0
TO-15	2,2-Dichloropropane	0.25	U	0.25	U	0.25	0.0	0.25	U	0.25	U	0.25	0.0
TO-15	Chloroform	1.07	J	0.96	J	1.0	11	0.96	J	0.87	J	0.92	9.8
TO-15	1,1,1-Trichloroethane	0.36	U	0.36	U	0.36	0.0	0.36	U	0.37	U	0.37	-2.7
TO-15	1,2-Dichloroethane	0.27	U	0.27	U	0.27	0.0	0.27	U	0.28	U	0.28	-3.6
TO-15	1,1-Dichloropropene	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	U	0.18	0.0
TO-15	Benzene	0.29	J	0.33	J	0.31	-13	0.33	J	0.25	J	0.29	28
TO-15	Carbon tetrachloride	0.42	U	0.42	U	0.42	0.0	0.42	U	0.42	U	0.42	0.0
TO-15	n-Heptane	0.15	U	0.15	U	0.15	0.0	0.15	U	0.15	U	0.15	0.0
TO-15	1,2-Dichloropropane	0.31	U	0.31	U	0.31	0.0	0.31	U	0.31	U	0.31	0.0
TO-15	1,4 Dioxane	0.44	U	0.44	U	0.44	0.0	0.44	U	0.45	U	0.45	-2.2
TO-15	Dibromomethane	0.16	U	0.16	U	0.16	0.0	0.16	U	0.16	U	0.16	0.0
TO-15	Trichloroethene	0.36	U	0.36	U	0.36	0.0	0.36	U	0.37	U	0.37	-2.7
TO-15	Bromodichloromethane	0.16	U	0.16	U	0.16	0.0	0.16	U	0.16	U	0.16	0.0
TO-15	Methyl Isobutyl Ketone	0.26	J	0.19	U	0.23	31	0.19	U	0.27	J	0.23	-35
TO-15	cis-1,3-Dichloropropene	0.32	U	0.32	U	0.32	0.0	0.32	U	0.32	U	0.32	0.0
TO-15	Toluene	0.25	U	0.25	U	0.25	0.0	0.25	U	0.26	U	0.26	-3.9
TO-15	trans-1,3-Dichloropropene	0.31	U	0.31	U	0.31	0.0	0.31	U	0.31	U	0.31	0.0
TO-15	1,1,2-Trichloroethane	0.36	U	0.36	U	0.36	0.0	0.36	U	0.37	U	0.37	-2.7
TO-15	2-Hexanone	0.39	J	0.18	J	0.29	74	0.18	J	0.19	J	0.19	-5.4
TO-15	1,3-Dichloropropane	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	U	0.18	0.0
TO-15	Dibromochloromethane	0.20	U	0.20	U	0.20	0.0	0.20	U	0.21	U	0.21	-4.9
TO-15	1,2-Dibromoethane	0.52	U	0.52	U	0.52	0.0	0.52	U	0.53	U	0.53	-1.9
TO-15	Tetrachloroethene	0.45	U	0.45	U	0.45	0.0	0.45	U	0.46	U	0.46	-2.2

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE		Mean	RPD	REPLICATE		DUPLICATE	Mean	RPD
			SF-3C	SF-3CR			SF-3CR	SF-3CRD			
			ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>			
TO-15	<b>Chlorobenzene</b>	0.31	U	0.31	U	0.31	0.0	0.31	U	0.31	0.0
TO-15	<b>1,1,1,2-Tetrachloroethane</b>	0.17	U	0.17	U	0.17	0.0	0.17	U	0.17	0.0
TO-15	<b>Ethylbenzene</b>	0.30	U	0.30	U	0.30	0.0	0.30	U	0.30	0.0
TO-15	<b>m &amp; p-Xylene</b>	0.59	U	0.59	U	0.59	0.0	0.59	U	0.59	0.0
TO-15	<b>Styrene</b>	0.29	U	0.29	U	0.29	0.0	0.29	U	0.29	0.0
TO-15	<b>Bromoform</b>	0.17	U	0.17	U	0.17	0.0	0.17	U	0.17	0.0
TO-15	<b>o-Xylene</b>	0.29	U	0.29	U	0.29	0.0	0.29	U	0.29	0.0
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	0.46	U	0.46	U	0.46	0.0	0.46	U	0.46	0.0
TO-15	<b>1,2,3-Trichloropropane</b>	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	0.0
TO-15	<b>n-Propylbenzene</b>	0.22	U	0.22	U	0.22	0.0	0.22	U	0.22	0.0
TO-15	<b>Isopropylbenzene</b>	0.23	U	0.23	U	0.23	0.0	0.23	U	0.23	0.0
TO-15	<b>1,3,5-Trimethylbenzene</b>	0.34	U	0.34	U	0.34	0.0	0.34	U	0.34	0.0
TO-15	<b>tert-butyl benzene</b>	0.22	U	0.22	U	0.22	0.0	0.22	U	0.22	0.0
TO-15	<b>1,2,4-Trimethylbenzene</b>	0.33	U	0.33	U	0.33	0.0	0.33	U	0.33	0.0
TO-15	<b>sec-butylbenzene</b>	0.23	U	0.23	U	0.23	0.0	0.23	U	0.24	-4.3
TO-15	<b>1,3-Dichlorobenzene</b>	0.40	U	0.40	U	0.40	0.0	0.40	U	0.41	-2.5
TO-15	<b>Isopropyltoluene</b>	0.23	U	0.23	U	0.23	0.0	0.23	U	0.23	0.0
TO-15	<b>Benzyl chloride</b>	0.40	U	0.40	U	0.40	0.0	0.40	U	0.40	0.0
TO-15	<b>1,4-Dichlorobenzene</b>	0.80	U	0.80	U	0.80	0.0	0.80	U	0.81	U
TO-15	<b>n-Butylbenzene</b>	0.43	U	0.43	U	0.43	0.0	0.43	U	0.44	U
TO-15	<b>1,2-Dichlorobenzene</b>	0.79	U	0.79	U	0.79	0.0	0.79	U	0.79	0.0
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	2.12	U	2.12	U	2.1	0.0	2.12	U	2.14	U
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	1.00	U	1.00	U	1.0	0.0	1.00	U	1.01	U
TO-15	<b>Hexachlorobutadiene</b>	1.44	U	1.44	U	1.4	0.0	1.44	U	1.45	U

**Bold-** flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean	RPD				
		SF-4C	SF-4CR			SF-4CR	SF-4CRD						
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>						
ASTM 1946	% Helium Trace Gas	NA	NA			NA	NA						
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.048	U	0.047	U	0.048	2.1	0.047	U	0.047	0.0		
TO-15 SIM	1,3-Dichlorobenzene	0.042	U	0.041	U	0.042	2.4	0.041	U	0.041	0.0		
TO-15 SIM	Benzyl chloride	0.020	U	0.019	U	0.020	5.1	0.019	U	0.019	0.0		
TO-15 SIM	1,4-Dichlorobenzene	0.043	J	0.044	J	0.044	-2.3	0.044	J	0.041	U	0.043	7.1
TO-15 SIM	1,2-Dichlorobenzene	0.041	U	0.041	J	0.041	0.0	0.041	J	0.040	U	0.041	2.5
TO-15 SIM	Hexachlorobutadiene	0.075	U	0.073	U	0.074	2.7	0.073	U	0.074	U	0.074	-1.4
TO-15 SIM	Naphthalene	0.080	U	0.095	J	0.088	-17	0.095	J	0.079	U	0.087	18
TO-15 SIM	1,2,3-Trichloropropane	0.037	U	0.036	U	0.037	2.7	0.036	U	0.037	U	0.037	-2.7
TO-15 SIM	Vinyl chloride	0.018	U	0.018	U	0.018	0.0	0.018	U	0.018	U	0.018	0.0
TO-15 SIM	Dichloromethane	0.025	U	0.024	U	0.025	4.1	0.024	U	0.024	U	0.024	0.0
TO-15 SIM	Chloroform	0.174		0.191		0.18	-9.3	0.191		0.208		0.20	-8.5
TO-15 SIM	1,2-Dichloroethane	0.028	U	0.028	U	0.028	0.0	0.028	U	0.028	U	0.028	0.0
TO-15 SIM	Benzene	0.234		0.202		0.22	15	0.202		0.201		0.20	0.50
TO-15 SIM	Carbon tetrachloride	0.044	U	0.043	U	0.044	2.3	0.043	U	0.043	U	0.043	0.0
TO-15 SIM	1,2-Dichloropropane	0.032	U	0.032	U	0.032	0.0	0.032	U	0.032	U	0.032	0.0
TO-15 SIM	Trichloroethene	0.038	U	0.037	U	0.038	2.7	0.037	U	0.037	U	0.037	0.0
TO-15 SIM	Bromodichloromethane	0.017	U	0.017	U	0.017	0.0	0.017	U	0.017	U	0.017	0.0
TO-15 SIM	1,2-Dibromoethane	0.054	U	0.053	U	0.054	1.9	0.053	U	0.054	U	0.054	-1.9
TO-15 SIM	1,1,2-Trichloroethane	0.038	U	0.037	U	0.038	2.7	0.037	U	0.037	U	0.037	0.0
TO-15 SIM	Tetrachloroethene	0.047	U	0.046	U	0.047	2.2	0.046	U	0.046	U	0.046	0.0
TO-15 SIM	Dibromochloromethane	0.043	U	0.042	U	0.043	2.4	0.042	U	0.042	U	0.042	0.0
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.121	J	0.124	J	0.12	-2.4	0.124	J	0.101	J	0.11	20
		ug/m <sup>3</sup>		ug/m <sup>3</sup>				ug/m <sup>3</sup>		ug/m <sup>3</sup>			
ASTM 1946	% Helium Trace Gas	NA	NA			NA	NA						
TO-15	Dichlorodifluoromethane	0.35	U	0.35	U	0.35	0.0	0.35	U	0.35	U	0.35	0.0
TO-15	Chloromethane	0.39	J	0.26	J	0.33	40	0.26	J	0.17	J	0.22	42
TO-15	Vinyl chloride	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	U	0.18	0.0
TO-15	Bromomethane	0.28	U	0.27	U	0.28	3.6	0.27	U	0.27	U	0.27	0.0
TO-15	Chloroethane	0.19	U	0.18	U	0.19	5.4	0.18	U	0.18	U	0.18	0.0
TO-15	Ethanol	4.04		2.55		3.3	45	2.55		4.04		3.3	-45
TO-15	Trichlorofluoromethane	0.40	U	0.39	U	0.40	2.5	0.39	U	0.39	U	0.39	0.0
TO-15	Acetonitrile	0.23	U	0.23	U	0.23	0.0	0.23	U	0.23	U	0.23	0.0
TO-15	Acetone	9.95		8.77		9.4	13	8.77		11.73		10	-29
TO-15	Methyl iodide	0.12	U	0.12	U	0.12	0.0	0.12	U	0.12	U	0.12	0.0

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean	RPD				
		SF-4C											
		ug/m <sup>3</sup>											
TO-15	1,1-Dichloroethene	0.27	U	0.27	U	0.27	0.0	0.27	U	0.27	0.0		
TO-15	Freon 113	0.53	U	0.52	U	0.53	1.9	0.52	U	0.52	0.0		
TO-15	Dichloromethane	0.25	U	0.24	U	0.25	4.1	0.24	U	0.24	0.0		
TO-15	Carbon disulfide	6.02		0.46	J	3.2	172	0.46	J	0.40	J	0.43	14
TO-15	trans-1,2-Dichloroethene	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	U	0.18	0.0
TO-15	Methyl tert butyl ether	0.17	U	0.16	U	0.17	6.1	0.16	U	0.16	U	0.16	0.0
TO-15	1,1-Dichloroethane	0.28	U	0.27	U	0.28	3.6	0.27	U	0.27	U	0.27	0.0
TO-15	Vinyl acetate	0.19	U	0.19	U	0.19	0.0	0.19	U	0.19	U	0.19	0.0
TO-15	2-Butanone	3.25		3.50		3.4	-7.4	3.50		3.33		3.4	5.0
TO-15	Bromochloromethane	0.18	U	0.17	U	0.18	5.7	0.17	U	0.17	U	0.17	0.0
TO-15	Isobutyl alcohol	0.16	U	0.15	U	0.16	6.5	0.15	U	0.15	U	0.15	0.0
TO-15	cis-1,2-Dichloroethene	0.28	U	0.27	U	0.28	3.6	0.27	U	0.27	U	0.27	0.0
TO-15	2,2-Dichloropropane	0.26	U	0.25	U	0.26	3.9	0.25	U	0.25	U	0.25	0.0
TO-15	Chloroform	0.34	U	0.33	U	0.34	3.0	0.33	U	0.33	U	0.33	0.0
TO-15	1,1,1-Trichloroethane	0.38	U	0.37	U	0.38	2.7	0.37	U	0.37	U	0.37	0.0
TO-15	1,2-Dichloroethane	0.28	U	0.28	U	0.28	0.0	0.28	U	0.28	U	0.28	0.0
TO-15	1,1-Dichloropropene	0.19	U	0.18	U	0.19	5.4	0.18	U	0.18	U	0.18	0.0
TO-15	Benzene	0.39	J	0.28	J	0.34	33	0.28	J	0.27	J	0.28	3.6
TO-15	Carbon tetrachloride	0.44	U	0.43	U	0.44	2.3	0.43	U	0.43	U	0.43	0.0
TO-15	n-Heptane	0.16	U	0.15	U	0.16	6.5	0.15	U	0.15	U	0.15	0.0
TO-15	1,2-Dichloropropane	0.32	U	0.32	U	0.32	0.0	0.32	U	0.32	U	0.32	0.0
TO-15	1,4 Dioxane	0.46	U	0.45	U	0.46	2.2	0.45	U	0.45	U	0.45	0.0
TO-15	Dibromomethane	0.17	U	0.16	U	0.17	6.1	0.16	U	0.17	U	0.17	-6.1
TO-15	Trichloroethene	0.38	U	0.37	U	0.38	2.7	0.37	U	0.37	U	0.37	0.0
TO-15	Bromodichloromethane	0.17	U	0.17	U	0.17	0.0	0.17	U	0.17	U	0.17	0.0
TO-15	Methyl Isobutyl Ketone	0.19	U	0.19	U	0.19	0.0	0.19	U	0.19	U	0.19	0.0
TO-15	cis-1,3-Dichloropropene	0.33	U	0.32	U	0.33	3.1	0.32	U	0.32	U	0.32	0.0
TO-15	Toluene	0.26	U	0.26	U	0.26	0.0	0.26	U	0.26	U	0.26	0.0
TO-15	trans-1,3-Dichloropropene	0.32	U	0.31	U	0.32	3.2	0.31	U	0.32	U	0.32	-3.2
TO-15	1,1,2-Trichloroethane	0.38	U	0.37	U	0.38	2.7	0.37	U	0.37	U	0.37	0.0
TO-15	2-Hexanone	0.18	U	0.18	U	0.18	0.0	0.18	U	0.18	U	0.18	0.0
TO-15	1,3-Dichloropropane	0.19	U	0.19	U	0.19	0.0	0.19	U	0.19	U	0.19	0.0
TO-15	Dibromochloromethane	0.21	U	0.21	U	0.21	0.0	0.21	U	0.21	U	0.21	0.0
TO-15	1,2-Dibromoethane	0.54	U	0.53	U	0.54	1.9	0.53	U	0.54	U	0.54	-1.9
TO-15	Tetrachloroethene	0.47	U	0.46	U	0.47	2.2	0.46	U	0.46	U	0.46	0.0

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE		Mean	RPD	REPLICATE		DUPLICATE		Mean	RPD	
			SF-4C	SF-4CR			SF-4CR	SF-4CRD	ug/m <sup>3</sup>	ug/m <sup>3</sup>			
			ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>			
TO-15	<b>Chlorobenzene</b>	0.32	U	0.31	U	0.32	3.2	0.31	U	0.32	U	0.32	-3.2
TO-15	<b>1,1,1,2-Tetrachloroethane</b>	0.18	U	0.17	U	0.18	5.7	0.17	U	0.18	U	0.18	-5.7
TO-15	<b>Ethylbenzene</b>	0.31	U	0.30	U	0.31	3.3	0.30	U	0.30	U	0.30	0.0
TO-15	<b>m &amp; p-Xylene</b>	0.61	U	0.60	U	0.61	1.7	0.60	U	0.60	U	0.60	0.0
TO-15	<b>Styrene</b>	0.30	U	0.29	U	0.30	3.4	0.29	U	0.29	U	0.29	0.0
TO-15	<b>Bromoform</b>	0.17	U	0.17	U	0.17	0.0	0.17	U	0.17	U	0.17	0.0
TO-15	<b>o-Xylene</b>	0.30	U	0.30	U	0.30	0.0	0.30	U	0.30	U	0.30	0.0
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	0.48	U	0.47	U	0.48	2.1	0.47	U	0.47	U	0.47	0.0
TO-15	<b>1,2,3-Trichloropropane</b>	0.19	U	0.18	U	0.19	5.4	0.18	U	0.18	U	0.18	0.0
TO-15	<b>n-Propylbenzene</b>	0.23	U	0.23	U	0.23	0.0	0.23	U	0.23	U	0.23	0.0
TO-15	<b>Isopropylbenzene</b>	0.23	U	0.23	U	0.23	0.0	0.23	U	0.23	U	0.23	0.0
TO-15	<b>1,3,5-Trimethylbenzene</b>	0.36	U	0.35	U	0.36	2.8	0.35	U	0.35	U	0.35	0.0
TO-15	<b>tert-butyl benzene</b>	0.23	U	0.22	U	0.23	4.4	0.22	U	0.22	U	0.22	0.0
TO-15	<b>1,2,4-Trimethylbenzene</b>	0.34	U	0.33	U	0.34	3.0	0.33	U	0.34	U	0.34	-3.0
TO-15	<b>sec-butylbenzene</b>	0.24	U	0.24	U	0.24	0.0	0.24	U	0.24	U	0.24	0.0
TO-15	<b>1,3-Dichlorobenzene</b>	0.42	U	0.41	U	0.42	2.4	0.41	U	0.41	U	0.41	0.0
TO-15	<b>Isopropyltoluene</b>	0.24	U	0.23	U	0.24	4.3	0.23	U	0.24	U	0.24	-4.3
TO-15	<b>Benzyl chloride</b>	0.41	U	0.41	U	0.41	0.0	0.41	U	0.41	U	0.41	0.0
TO-15	<b>1,4-Dichlorobenzene</b>	0.84	U	0.82	U	0.83	2.4	0.82	U	0.82	U	0.82	0.0
TO-15	<b>n-Butylbenzene</b>	0.45	U	0.44	U	0.45	2.2	0.44	U	0.44	U	0.44	0.0
TO-15	<b>1,2-Dichlorobenzene</b>	0.82	U	0.80	U	0.81	2.5	0.80	U	0.81	U	0.81	-1.2
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	2.21	U	2.16	U	2.2	2.3	2.16	U	2.17	U	2.2	-0.46
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	1.04	U	1.02	U	1.0	1.9	1.02	U	1.03	U	1.0	-1.0
TO-15	<b>Hexachlorobutadiene</b>	1.50	U	1.46	U	1.5	2.7	1.46	U	1.47	U	1.5	-0.68

**Bold**- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m3).

METHOD	COMPOUND	SF-MB-01	SF-MB-02	SF-SB-01	SF-SB-02	QC QUAL
		ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
		Media Blk	Media Blk	System Blk	System Blk	
ASTM 1946	% Helium Trace Gas					
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.046	U	0.036	U	0.046
TO-15 SIM	1,3-Dichlorobenzene	0.040	U	0.032	U	0.055
TO-15 SIM	Benzyl chloride	0.019	U	0.015	U	0.019
TO-15 SIM	1,4-Dichlorobenzene	0.040	U	0.032	U	0.061
TO-15 SIM	1,2-Dichlorobenzene	0.039	U	0.031	U	0.055
TO-15 SIM	Hexachlorobutadiene	0.092	J	0.057	U	0.100
TO-15 SIM	Naphthalene	0.500	B	0.061	U	0.549
TO-15 SIM	1,2,3-Trichloropropane	0.058	J	0.028	U	0.036
TO-15 SIM	Vinyl chloride	0.017	U	0.014	U	0.017
TO-15 SIM	Dichloromethane	0.024	U	0.019	U	0.024
TO-15 SIM	Chloroform	0.033	U	0.026	U	0.033
TO-15 SIM	1,2-Dichloroethane	0.027	U	0.022	U	0.027
TO-15 SIM	Benzene	0.157	J	0.098	U	0.117
TO-15 SIM	Carbon tetrachloride	0.042	U	0.033	U	0.042
TO-15 SIM	1,2-Dichloropropane	0.031	U	0.025	U	0.031
TO-15 SIM	Trichloroethene	0.036	U	0.029	U	0.036
TO-15 SIM	Bromodichloromethane	0.016	U	0.013	U	0.016
TO-15 SIM	1,2-Dibromoethane	0.052	U	0.041	U	0.052
TO-15 SIM	1,1,2-Trichloroethane	0.036	U	0.029	U	0.036
TO-15 SIM	Tetrachloroethene	0.045	U	0.036	U	0.045
TO-15 SIM	Dibromochloromethane	0.041	U	0.032	U	0.041
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.719		0.098	J	0.761
ASTM 1946	% Helium Trace Gas					
TO-15	Dichlorodifluoromethane	0.34	U	0.27	U	0.34
TO-15	Chloromethane	0.14	U	0.11	U	0.14
TO-15	Vinyl chloride	0.17	U	0.14	U	0.17
TO-15	Bromomethane	0.26	U	0.21	U	0.26
TO-15	Chloroethane	0.18	U	0.14	U	0.18
TO-15	Ethanol	2.27		2.13	1.54	J
TO-15	Trichlorofluoromethane	0.38	U	0.30	U	0.38
TO-15	Acetonitrile	0.22	U	0.18	U	0.22
TO-15	Acetone	7.15		4.34	4.55	5.46
TO-15	Methyl iodide	0.11	U	0.09	U	0.11

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SF-MB-01	SF-MB-02	SF-SB-01	SF-SB-02	QC QUAL					
		ug/m <sup>3</sup>									
		Media Blk	Media Blk	System Blk	System Blk						
TO-15	<b>1,1-Dichloroethene</b>	0.26	U	0.21	U	0.26	U	0.26	U		
TO-15	<b>Freon 113</b>	0.51	U	0.40	U	0.51	U	0.51	U		
TO-15	<b>Dichloromethane</b>	0.24	U	0.19	U	0.23	U	0.24	U		
TO-15	<b>Carbon disulfide</b>	0.17	U	0.14	U	0.17	U	0.20	J		
TO-15	<b>trans-1,2-Dichloroethene</b>	0.17	U	0.14	U	0.17	U	0.17	U		
TO-15	<b>Methyl tert butyl ether</b>	0.16	U	0.13	U	0.16	U	0.16	U		
TO-15	<b>1,1-Dichloroethane</b>	0.27	U	0.21	U	0.27	U	0.27	U		
TO-15	<b>Vinyl acetate</b>	0.19	U	0.15	U	0.19	U	0.19	U		
TO-15	<b>2-Butanone</b>	<b>2.25</b>		<b>1.96</b>		<b>1.43</b>		<b>2.08</b>		<b>2.25</b>	
TO-15	<b>Bromochloromethane</b>	0.17	U	0.13	U	0.17	U	0.17	U		
TO-15	<b>Isobutyl alcohol</b>	0.15	U	0.12	U	0.15	U	0.15	U		
TO-15	<b>cis-1,2-Dichloroethene</b>	0.27	U	0.21	U	0.27	U	0.27	U		
TO-15	<b>2,2-Dichloropropane</b>	0.25	U	0.20	U	0.25	U	0.25	U		
TO-15	<b>Chloroform</b>	0.33	U	0.26	U	0.32	U	0.33	U		
TO-15	<b>1,1,1-Trichloroethane</b>	0.36	U	0.29	U	0.36	U	0.36	U		
TO-15	<b>1,2-Dichloroethane</b>	0.27	U	0.22	U	0.27	U	0.27	U		
TO-15	<b>1,1-Dichloropropene</b>	0.18	U	0.14	U	0.18	U	0.18	U		
TO-15	<b>Benzene</b>	0.22	U	0.21	J	0.21	U	0.22	U		
TO-15	<b>Carbon tetrachloride</b>	0.42	U	0.33	U	0.42	U	0.42	U		
TO-15	<b>n-Heptane</b>	0.15	U	0.12	U	0.15	U	0.15	U		
TO-15	<b>1,2-Dichloropropane</b>	0.31	U	0.25	U	0.31	U	0.31	U		
TO-15	<b>1,4 Dioxane</b>	0.44	U	0.35	U	0.44	U	0.44	U		
TO-15	<b>Dibromomethane</b>	0.16	U	0.13	U	0.16	U	0.16	U		
TO-15	<b>Trichloroethene</b>	0.36	U	0.29	U	0.36	U	0.36	U		
TO-15	<b>Bromodichloromethane</b>	0.16	U	0.13	U	0.16	U	0.16	U		
TO-15	<b>Methyl Isobutyl Ketone</b>	0.19	U	0.15	U	0.19	U	0.19	U		
TO-15	<b>cis-1,3-Dichloropropene</b>	0.32	U	0.25	U	0.31	U	0.32	U		
TO-15	<b>Toluene</b>	0.25	U	0.20	U	0.25	U	0.26	J	0.26	J
TO-15	<b>trans-1,3-Dichloropropene</b>	0.31	U	0.24	U	0.31	U	0.31	U	0.31	U
TO-15	<b>1,1,2-Trichloroethane</b>	0.36	U	0.29	U	0.36	U	0.36	U	0.36	U
TO-15	<b>2-Hexanone</b>	0.18	U	0.14	U	0.17	U	0.18	U	0.18	U
TO-15	<b>1,3-Dichloropropane</b>	0.18	U	0.14	U	0.18	U	0.18	U	0.18	U
TO-15	<b>Dibromochloromethane</b>	0.20	U	0.16	U	0.20	U	0.20	U	0.20	U
TO-15	<b>1,2-Dibromoethane</b>	0.52	U	0.41	U	0.52	U	0.52	U	0.52	U
TO-15	<b>Tetrachloroethene</b>	0.45	U	0.36	U	0.45	U	0.45	U	0.45	U

Table 2A. Summary of Flux Chamber QC Data- Field Replicate and Duplicate Data with RPD Data, Media Blanks, and System Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SF-MB-01	SF-MB-02	SF-SB-01	SF-SB-02	QC QUAL	
		ug/m <sup>3</sup>					
		Media Blk	Media Blk	System Blk	System Blk		
TO-15	<b>Chlorobenzene</b>	0.31	U	0.24	U	0.31	U
TO-15	<b>1,1,1,2-Tetrachloroethane</b>	0.17	U	0.13	U	0.17	U
TO-15	<b>Ethylbenzene</b>	0.30	U	0.23	U	0.29	U
TO-15	<b>m &amp; p-Xylene</b>	0.59	U	0.46	U	0.58	U
TO-15	<b>Styrene</b>	0.29	U	0.23	U	0.29	U
TO-15	<b>Bromoform</b>	0.17	U	0.13	U	0.17	U
TO-15	<b>o-Xylene</b>	0.29	U	0.23	U	0.29	U
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	0.46	U	0.36	U	0.46	U
TO-15	<b>1,2,3-Trichloropropane</b>	0.18	U	0.14	U	0.18	U
TO-15	<b>n-Propylbenzene</b>	0.22	U	0.18	U	0.22	U
TO-15	<b>Isopropylbenzene</b>	0.23	U	0.18	U	0.22	U
TO-15	<b>1,3,5-Trimethylbenzene</b>	0.34	U	0.27	U	0.34	U
TO-15	<b>tert-butyl benzene</b>	0.22	U	0.17	U	0.22	U
TO-15	<b>1,2,4-Trimethylbenzene</b>	0.33	U	0.26	U	0.33	U
TO-15	<b>sec-butylbenzene</b>	0.23	U	0.18	U	0.23	U
TO-15	<b>1,3-Dichlorobenzene</b>	0.40	U	0.32	U	0.40	U
TO-15	<b>Isopropyltoluene</b>	0.23	U	0.18	U	0.23	U
TO-15	<b>Benzyl chloride</b>	0.40	U	0.31	U	0.40	U
TO-15	<b>1,4-Dichlorobenzene</b>	0.80	U	0.63	U	0.80	U
TO-15	<b>n-Butylbenzene</b>	0.43	U	0.34	U	0.43	U
TO-15	<b>1,2-Dichlorobenzene</b>	0.79	U	0.62	U	0.78	U
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	2.12	U	1.67	U	2.11	U
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	1.00	U	0.79	U	0.99	U
TO-15	<b>Hexachlorobutadiene</b>	1.44	U	1.13	U	1.43	U
		1.44	U	1.13	U	1.44	U

**Bold-** flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean
		STA-3C-5	STA-3CR-5			STA-3CR-5		
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>		
ASTM 1946	% Helium Trace Gas	26.738	5.979	16	127	5.979	8.123	7.1
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.356	U 0.231	U	0.29	43 0.231	U 0.233	U 0.23
TO-15 SIM	1,3-Dichlorobenzene	0.312	U 0.203	U	0.26	42 0.203	U 0.204	U 0.20
TO-15 SIM	Benzyl chloride	0.147	U 0.10	U	0.12	43 0.095	U 0.096	U 0.10
TO-15 SIM	1,4-Dichlorobenzene	0.312	U 0.203	U	0.26	42 0.203	U 0.204	U 0.20
TO-15 SIM	1,2-Dichlorobenzene	0.306	U 0.199	U	0.25	42 0.199	U 0.200	U 0.20
TO-15 SIM	Hexachlorobutadiene	0.559	U 0.399	J	0.48	33 0.399	J 0.393	J 0.40
TO-15 SIM	Naphthalene	2.145	J 1.214	J	1.7	55 1.214	J 1.296	J 1.3
TO-15 SIM	1,2,3-Trichloropropane	0.278	U 0.181	U	0.23	42 0.181	U 0.182	U 0.18
TO-15 SIM	Vinyl chloride	0.135	U 0.088	U	0.11	42 0.088	U 0.089	U 0.089
TO-15 SIM	Dichloromethane	2.765	2.048		2.4	30 2.048	0.486	J 1.3
TO-15 SIM	Chloroform	749.773	E 6.822		378	196 6.822	10.508	
TO-15 SIM	1,2-Dichloroethane	0.401	J 0.891		0.65	-76 0.891	0.139	U 0.52
TO-15 SIM	Benzene	13.873	2.374		8.1	142 2.374	4.527	
TO-15 SIM	Carbon tetrachloride	17.649	0.618	J	9.1	186 0.618	J 0.770	J 0.69
TO-15 SIM	1,2-Dichloropropane	0.242	U 0.157	U	0.20	43 0.157	U 0.159	U 0.16
TO-15 SIM	Trichloroethene	0.281	U 0.237	J	0.26	17 0.237	J 0.184	U 0.21
TO-15 SIM	Bromodichloromethane	0.126	U 0.082	U	0.10	42 0.082	U 0.083	U 0.083
TO-15 SIM	1,2-Dibromoethane	0.406	U 0.264	U	0.34	42 0.264	U 0.266	U 0.27
TO-15 SIM	1,1,2-Trichloroethane	0.283	U 0.184	U	0.23	42 0.184	U 0.185	U 0.18
TO-15 SIM	Tetrachloroethene	2.442	0.366	J	1.4	148 0.366	J 0.749	J 0.56
TO-15 SIM	Dibromochloromethane	0.319	U 0.207	U	0.26	43 0.207	U 0.209	U 0.21
TO-15 SIM	1,2-Dibromo-3-chloropropane	1.331	J 1.095		1.2	19 1.095	1.248	
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>	
ASTM 1946	% Helium Trace Gas	26.738	5.979	16	127	5.979	8.123	7.1
TO-15	Dichlorodifluoromethane	2.95	J 3.34	J	3.1	-12 3.34	J 3.53	J 3.4
TO-15	Chloromethane	3.71	J 5.02		4.4	-30 5.02	2.30	J 3.7
TO-15	Vinyl chloride	1.35	U 0.88	U	1.1	42 0.88	U 0.89	U 0.89
TO-15	Bromomethane	2.05	U 1.33	U	1.7	43 1.33	U 1.34	U 1.3
TO-15	Chloroethane	2.23	J 1.81	J	2.0	21 1.81	J 0.91	U 1.4
TO-15	Ethanol	3.30	U 15.98		10	-132 15.98	20.02	
TO-15	Trichlorofluoromethane	2.97	U 1.93	U	2.5	42 1.93	U 1.98	J 2.0
TO-15	Acetonitrile	1.74	U 1.13	U	1.4	43 1.13	U 1.14	U 1.1
TO-15	Acetone	145.84	181.39		164	-22 181.39	65.45	
TO-15	Methyl iodide	0.89	U 0.58	U	0.74	42 0.58	U 0.58	U 0.58

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean
		STA-3C-5	STA-3CR-5			STA-3CR-5		
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>		
TO-15	1,1-Dichloroethene	2.04	U	1.32	U	1.7	43	1.32
TO-15	Freon 113	3.97	U	2.58	U	3.3	42	2.58
TO-15	Dichloromethane	2.40	J	2.32	J	2.4	3.4	2.32
TO-15	Carbon disulfide	1.38	J	1.40	J	1.4	-1.4	1.40
TO-15	trans-1,2-Dichloroethene	1.34	U	0.87	U	1.1	43	0.87
TO-15	Methyl tert butyl ether	1.24	U	0.81	U	1.0	42	0.81
TO-15	1,1-Dichloroethane	2.08	U	1.35	U	1.7	43	1.35
TO-15	Vinyl acetate	1.45	U	0.94	U	1.2	43	0.94
TO-15	2-Butanone	37.93		26.88		32	34	26.88
TO-15	Bromochloromethane	1.32	U	0.88	J	1.1	40	0.88
TO-15	Isobutyl alcohol	1.17	U	0.76	U	1.0	42	0.76
TO-15	cis-1,2-Dichloroethene	2.08	U	1.35	U	1.7	43	1.35
TO-15	2,2-Dichloropropane	1.92	U	1.25	U	1.6	42	1.25
TO-15	Chloroform	880.77		7.78	J	444	196	7.78
TO-15	1,1,1-Trichloroethane	2.83	U	1.84	U	2.3	42	1.84
TO-15	1,2-Dichloroethane	2.12	U	1.38	U	1.8	42	1.38
TO-15	1,1-Dichloropropene	1.40	U	0.91	U	1.2	42	0.91
TO-15	Benzene	13.35		3.81	J	8.6	111	3.81
TO-15	Carbon tetrachloride	15.75	J	2.12	U	8.9	153	2.12
TO-15	n-Heptane	8.78		1.32	J	5.1	148	1.32
TO-15	1,2-Dichloropropane	2.42	U	1.57	U	2.0	43	1.57
TO-15	1,4 Dioxane	3.44	U	2.24	U	2.8	42	2.24
TO-15	Dibromomethane	1.25	U	0.81	U	1.0	43	0.81
TO-15	Trichloroethene	2.81	U	1.83	U	2.3	42	1.83
TO-15	Bromodichloromethane	1.26	U	0.82	U	1.0	42	0.82
TO-15	Methyl Isobutyl Ketone	1.45	U	0.94	U	1.2	43	0.94
TO-15	cis-1,3-Dichloropropene	2.45	U	1.59	U	2.0	43	1.59
TO-15	Toluene	29.54		13.20		21	76	13.20
TO-15	trans-1,3-Dichloropropene	2.40	U	1.56	U	2.0	42	1.56
TO-15	1,1,2-Trichloroethane	2.83	U	1.84	U	2.3	42	1.84
TO-15	2-Hexanone	1.36	U	0.88	U	1.1	43	0.88
TO-15	1,3-Dichloropropane	1.42	U	0.92	U	1.2	43	0.92
TO-15	Dibromochloromethane	1.59	U	1.03	U	1.3	43	1.03
TO-15	1,2-Dibromoethane	4.06	U	2.64	U	3.4	42	2.64
TO-15	Tetrachloroethene	3.52	U	2.29	U	2.9	42	2.29

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	Mean
		STA-3C-5	STA-3CR-5			STA-3CR-5		
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>		
TO-15	Chlorobenzene	2.39	U	1.55	U	2.0	43	1.55
TO-15	1,1,1,2-Tetrachloroethane	1.33	U	0.86	U	1.1	43	0.86
TO-15	Ethylbenzene	4.34	J	4.65	J	4.5	-6.9	4.65
TO-15	m & p-Xylene	<b>23.55</b>		<b>34.51</b>		29	-38	<b>34.51</b>
TO-15	Styrene	2.23	U	1.45	U	1.8	42	1.45
TO-15	Bromoform	1.30	U	0.84	U	1.1	43	0.84
TO-15	o-Xylene	10.51	J	14.44		12	-32	14.44
TO-15	1,1,2,2-Tetrachloroethane	3.56	U	2.31	U	2.9	43	2.31
TO-15	1,2,3-Trichloropropane	1.39	U	0.90	U	1.1	43	0.90
TO-15	n-Propylbenzene	2.37	J	<b>7.40</b>		4.9	-103	<b>7.40</b>
TO-15	Isopropylbenzene	<b>10.50</b>		<b>32.10</b>		21	-101	<b>32.10</b>
TO-15	1,3,5-Trimethylbenzene	5.06	J	<b>9.48</b>		7.3	-61	<b>9.48</b>
TO-15	tert-butyl benzene	1.70	U	5.55	J	3.6	-106	5.55
TO-15	1,2,4-Trimethylbenzene	<b>23.05</b>		<b>37.43</b>		30	-48	<b>37.43</b>
TO-15	sec-butylbenzene	1.81	U	1.73	J	1.8	5	1.73
TO-15	1,3-Dichlorobenzene	3.12	U	2.03	U	2.6	42	2.03
TO-15	Isopropyltoluene	1.79	U	1.86	J	1.8	-4	1.86
TO-15	Benzyl chloride	3.10	U	2.01	U	2.6	43	2.01
TO-15	1,4-Dichlorobenzene	6.24	U	4.05	U	5.1	43	4.05
TO-15	n-Butylbenzene	3.35	U	6.74	J	5.0	-67	6.74
TO-15	1,2-Dichlorobenzene	6.11	U	3.97	U	5.0	42	3.97
TO-15	1,2-Dibromo-3-chloropropane	16.46	U	10.70	U	14	42	10.70
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	7.77	U	5.05	U	6.4	42	5.05
TO-15	Hexachlorobutadiene	11.17	U	7.26	U	9.2	42	7.26

Bold- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	RPD	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPPLICATE
			STA-3C-10 ug/m <sup>3</sup>	STA-3CR-10 ug/m <sup>3</sup>			STA-3CR-10 ug/m <sup>3</sup>	STA-3C-10-DUP ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	-30	41.757	31.435	37	28	31.435	26.9
TO-15 SIM	1,1,2,2-Tetrachloroethane	-0.86	0.291	U 0.255	U 0.27	13	0.255	U 0.246
TO-15 SIM	1,3-Dichlorobenzene	-0.49	0.255	U 0.223	U 0.24	13	0.223	U 0.215
TO-15 SIM	Benzyl chloride	-1.0	0.120	U 0.105	U 0.11	13	0.105	U 0.101
TO-15 SIM	1,4-Dichlorobenzene	-0.49	0.255	U 0.223	U 0.24	13	0.223	U 0.215
TO-15 SIM	1,2-Dichlorobenzene	-0.50	0.250	U 0.219	U 0.23	13	0.219	U 0.211
TO-15 SIM	Hexachlorobutadiene	1.5	0.457	U 0.400	U 0.43	13	0.400	U 0.386
TO-15 SIM	Naphthalene	-6.5	1.678	J 0.993	J 1.3	51	0.993	J 1.029
TO-15 SIM	1,2,3-Trichloropropane	-0.55	0.227	U 0.199	U 0.21	13	0.199	U 0.192
TO-15 SIM	Vinyl chloride	-1.1	0.110	U 0.097	U 0.10	13	0.097	U 0.093
TO-15 SIM	Dichloromethane	123	2.427	U 0.131	U 1.3	180	0.131	U 0.517
TO-15 SIM	Chloroform	-43	894.574	E 2.909	449	199	2.909	16.905
TO-15 SIM	1,2-Dichloroethane	146	0.173	U 0.152	U 0.16	13	0.152	U 0.146
TO-15 SIM	Benzene	-62	4.496	0.738	2.6	144	0.738	2.276
TO-15 SIM	Carbon tetrachloride	-22	20.630	U 0.580	J 11	189	0.580	J 0.826
TO-15 SIM	1,2-Dichloropropane	-1.3	0.198	U 0.173	U 0.19	13	0.173	U 0.167
TO-15 SIM	Trichloroethene	25	0.230	U 0.201	U 0.22	13	0.201	U 0.277
TO-15 SIM	Bromodichloromethane	-1.2	0.103	U 0.090	U 0.10	13	0.090	U 0.087
TO-15 SIM	1,2-Dibromoethane	-0.75	0.332	U 0.291	U 0.31	13	0.291	U 0.281
TO-15 SIM	1,1,2-Trichloroethane	-0.54	0.231	U 0.203	U 0.22	13	0.203	U 0.195
TO-15 SIM	Tetrachloroethene	-69	3.899	U 0.753	J 2.3	135	0.753	J 5.533
TO-15 SIM	Dibromochloromethane	-1.0	0.261	U 0.228	U 0.24	13	0.228	U 0.220
TO-15 SIM	1,2-Dibromo-3-chloropropane	-13	0.814	J 1.182	J 1.0	-37	1.182	J 1.225
			ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>	ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	-30	41.757	31.435	37	28	31.435	26.9
TO-15	Dichlorodifluoromethane	-5.5	2.16	U 2.62	J 2.4	-19	2.62	J 2.13
TO-15	Chloromethane	74	2.64	J 1.64	J 2.1	47	1.64	J 1.57
TO-15	Vinyl chloride	-1.1	1.10	U 0.97	U 1.0	13	0.97	U 0.93
TO-15	Bromomethane	-0.75	1.68	U 1.47	U 1.6	13	1.47	U 1.42
TO-15	Chloroethane	66	1.14	U 1.00	U 1.1	13	1.00	U 0.96
TO-15	Ethanol	-22	2.70	U 2.36	U 2.5	13	2.36	U 12.18
TO-15	Trichlorofluoromethane	-2.6	2.43	U 2.13	U 2.3	13	2.13	U 2.05
TO-15	Acetonitrile	-0.88	1.43	U 1.25	U 1.3	13	1.25	U 1.20
TO-15	Acetone	94	116.80	U 5.92	J 61	181	5.92	J 54.63
TO-15	Methyl iodide	0.0	0.73	U 0.64	U 0.69	13	0.64	U 0.62

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>)

METHOD	COMPOUND	RPD	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE
			STA-3C-10	STA-3CR-10			ug/m3	
			ug/m3	ug/m3			ug/m3	ug/m3
TO-15	1,1-Dichloroethene	-0.75	1.66	U 1.46	U 1.6	13	1.46	U 1.41
TO-15	Freon 113	-0.77	3.25	U 2.84	U 3.0	13	2.84	U 2.74
TO-15	Dichloromethane	64	1.58	J 1.31	U 1.4	19	1.31	U 1.27
TO-15	Carbon disulfide	-154	6.62	0.97	U 3.8	149	0.97	U 0.93
TO-15	trans-1,2-Dichloroethene	-1.1	1.09	U 0.96	U 1.0	13	0.96	U 0.92
TO-15	Methyl tert butyl ether	0.0	1.02	U 1.57	J 1.3	-42	1.57	J 0.86
TO-15	1,1-Dichloroethane	-0.74	1.70	U 1.49	U 1.6	13	1.49	U 1.44
TO-15	Vinyl acetate	-1.1	1.18	U 1.04	U 1.1	13	1.04	U 1.00
TO-15	2-Butanone	46	41.98	1.01	U 21	191	1.01	U 15.94
TO-15	Bromochloromethane	2.3	1.08	U 0.94	U 1.0	14	0.94	U 0.91
TO-15	Isobutyl alcohol	-1.3	0.96	U 0.84	U 0.90	13	0.84	U 0.81
TO-15	cis-1,2-Dichloroethene	-0.74	1.70	U 1.49	U 1.6	13	1.49	U 1.43
TO-15	2,2-Dichloropropane	-0.80	1.57	U 1.38	U 1.5	13	1.38	U 1.33
TO-15	Chloroform	-39	937.74	2.11	J 470	199	2.11	J 16.07
TO-15	1,1,1-Trichloroethane	-0.54	2.31	U 2.03	U 2.2	13	2.03	U 1.95
TO-15	1,2-Dichloroethane	-0.72	1.73	U 1.52	U 1.6	13	1.52	U 1.46
TO-15	1,1-Dichloropropene	-1.1	1.14	U 1.00	U 1.1	13	1.00	U 0.97
TO-15	Benzene	-57	4.90	J 2.35	J 3.6	70	2.35	J 3.18
TO-15	Carbon tetrachloride	-0.94	21.28	2.34	U 12	160	2.34	U 2.25
TO-15	n-Heptane	9	9.15	0.83	U 5.0	167	0.83	U 1.12
TO-15	1,2-Dichloropropane	-1.3	1.98	U 1.73	U 1.9	13	1.73	U 1.67
TO-15	1,4 Dioxane	-0.89	2.82	U 2.47	U 2.6	13	2.47	U 2.38
TO-15	Dibromomethane	-1.2	1.02	U 0.90	U 1.0	13	0.90	U 0.86
TO-15	Trichloroethene	-0.54	2.30	U 2.01	U 2.2	13	2.01	U 1.94
TO-15	Bromodichloromethane	-1.2	1.03	U 0.90	U 1.0	13	0.90	U 0.87
TO-15	Methyl Isobutyl Ketone	-83	1.19	U 1.04	U 1.1	13	1.04	U 1.55
TO-15	cis-1,3-Dichloropropene	-0.63	2.00	U 1.75	U 1.9	13	1.75	U 1.69
TO-15	Toluene	55	14.32	1.41	U 7.9	164	1.41	U 4.68
TO-15	trans-1,3-Dichloropropene	-0.64	1.96	U 1.72	U 1.8	13	1.72	U 1.66
TO-15	1,1,2-Trichloroethane	-0.54	2.31	U 2.03	U 2.2	13	2.03	U 1.95
TO-15	2-Hexanone	-71	1.11	U 0.97	U 1.0	13	0.97	U 2.33
TO-15	1,3-Dichloropropane	-1.1	1.16	U 1.02	U 1.1	13	1.02	U 0.98
TO-15	Dibromochloromethane	-1.0	1.30	U 1.14	U 1.2	13	1.14	U 1.10
TO-15	1,2-Dibromoethane	-0.75	3.32	U 2.91	U 3.1	13	2.91	U 2.81
TO-15	Tetrachloroethene	-0.44	4.52	J 2.52	U 3.5	57	2.52	U 10.33

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	RPD	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	DUPLICATE	ug/m <sup>3</sup>
			STA-3C-10	STA-3CR-10			STA-3CR-10		
			ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>		
TO-15	Chlorobenzene	-0.64	1.95	U	1.71	U	1.8	13	1.71
TO-15	1,1,1,2-Tetrachloroethane	-1.2	1.09	U	0.95	U	1.0	14	0.95
TO-15	Ethylbenzene	102	1.88	U	1.64	U	1.8	14	1.64
TO-15	m & p-Xylene	147	5.62	J	3.26	U	4.4	53	3.26
TO-15	Styrene	-0.69	1.82	U	1.60	U	1.7	13	1.60
TO-15	Bromoform	-1.2	1.06	U	0.93	U	1.0	13	0.93
TO-15	o-Xylene	151	2.46	J	1.61	U	2.0	42	1.61
TO-15	1,1,2,2-Tetrachloroethane	-0.86	2.91	U	2.55	U	2.7	13	2.55
TO-15	1,2,3-Trichloropropane	-1.1	1.13	U	0.99	U	1.1	13	0.99
TO-15	n-Propylbenzene	147	1.41	U	1.23	U	1.3	14	1.23
TO-15	Isopropylbenzene	186	1.43	U	1.25	U	1.3	13	1.25
TO-15	1,3,5-Trimethylbenzene	138	2.17	U	1.90	U	2.0	13	1.90
TO-15	tert-butyl benzene	133	1.39	U	1.22	U	1.3	13	1.22
TO-15	1,2,4-Trimethylbenzene	183	2.08	U	1.83	U	2.0	13	1.83
TO-15	sec-butylbenzene	37	1.48	U	1.30	U	1.4	13	1.30
TO-15	1,3-Dichlorobenzene	-0.49	2.55	U	2.23	U	2.4	13	2.23
TO-15	Isopropyltoluene	46	1.46	U	1.28	U	1.4	13	1.28
TO-15	Benzyl chloride	-1.0	2.53	U	2.22	U	2.4	13	2.22
TO-15	1,4-Dichlorobenzene	-0.74	5.10	U	4.46	U	4.8	13	4.46
TO-15	n-Butylbenzene	102	2.74	U	2.40	U	2.6	13	2.40
TO-15	1,2-Dichlorobenzene	-0.75	5.00	U	4.38	U	4.7	13	4.38
TO-15	1,2-Dibromo-3-chloropropane	-0.74	13.46	U	11.78	U	13	13	11.78
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	-0.79	6.35	U	5.56	U	6.0	13	5.56
TO-15	Hexachlorobutadiene	-0.82	9.13	U	8.00	U	8.6	13	8.00

Bold- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	Mean	RPD	SAMPLE	REPLICATE	Mean	RPD	REPLICATE	ug/m <sup>3</sup>	
				STA-4C-5	STA-4CR-5			STA-4CR-5		
				ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>		
ASTM 1946	% Helium Trace Gas	29	16	0.02	U	0.023	J	0	-14	9.81
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.25	3.6	0.271	U	0.320	U	0.30	-16.6	0.320
TO-15 SIM	1,3-Dichlorobenzene	0.22	3.7	0.237	U	0.280	U	0.26	-16.6	0.280
TO-15 SIM	Benzyl chloride	0.10	3.9	0.112	U	0.132	U	0.12	-16.4	0.132
TO-15 SIM	1,4-Dichlorobenzene	0.22	3.7	0.237	U	0.280	U	0.26	-16.6	0.280
TO-15 SIM	1,2-Dichlorobenzene	0.22	3.7	7.271	J	0.275	U	3.77	185.4	0.275
TO-15 SIM	Hexachlorobutadiene	0.39	3.6	0.425	U	0.502	U	0.46	-16.6	0.502
TO-15 SIM	Naphthalene	1.0	-3.6	0.455	U	0.801	J	0.6	-55.1	0.801
TO-15 SIM	1,2,3-Trichloropropane	0.20	3.6	0.212	U	0.250	U	0.23	-16.5	0.250
TO-15 SIM	Vinyl chloride	0.10	4.2	0.103	U	0.121	U	0.11	-16.1	0.121
TO-15 SIM	Dichloromethane	0.32	-119	0.909		0.403	J	0.66	77	0.403
TO-15 SIM	Chloroform	9.9	-141	135.910	E	43.537	E	89.7	103	43.537
TO-15 SIM	1,2-Dichloroethane	0.15	4.0	0.161	U	0.191	U	0.18	-17.0	0.191
TO-15 SIM	Benzene	1.5	-102	5.251		1.227		3.2	124	1.227
TO-15 SIM	Carbon tetrachloride	0.70	-35	3.565		2.392		2.98	39	2.392
TO-15 SIM	1,2-Dichloropropane	0.17	3.5	0.184	U	0.217	U	0.20	-16.5	0.217
TO-15 SIM	Trichloroethene	0.24	-32	0.214	U	0.289	J	0.25	-30	0.289
TO-15 SIM	Bromodichloromethane	0.089	3.4	0.096	U	0.113	U	0.105	-16.3	0.113
TO-15 SIM	1,2-Dibromoethane	0.29	3.5	0.309	U	0.365	U	0.34	-16.6	0.365
TO-15 SIM	1,1,2-Trichloroethane	0.20	4.0	0.215	U	0.254	U	0.23	-16.6	0.254
TO-15 SIM	Tetrachloroethene	3.1	-152	1.123	J	0.773	J	0.9	37	0.773
TO-15 SIM	Dibromochloromethane	0.22	3.6	0.243	U	0.286	U	0.26	-16.3	0.286
TO-15 SIM	1,2-Dibromo-3-chloropropane	1.2	-3.6	0.622	J	1.484	J	1.1	-81.9	1.484
				ug/m <sup>3</sup>		ug/m <sup>3</sup>			ug/m <sup>3</sup>	
ASTM 1946	% Helium Trace Gas	29	16	0.02	U	0.023	J	0	-14	9.81
TO-15	Dichlorodifluoromethane	2.4	21	2.17	J	3.12	J	2.6	-36	3.12
TO-15	Chloromethane	1.6	4.4	2.71	J	1.91	J	2.3	34.6	1.91
TO-15	Vinyl chloride	1.0	4.2	1.03	U	1.21	U	1.1	-16.1	1.21
TO-15	Bromomethane	1.4	3.5	1.56	U	1.84	U	1.7	-16.5	1.84
TO-15	Chloroethane	1.0	4.1	1.06	U	1.37	J	1.2	-25.5	1.37
TO-15	Ethanol	7.3	-135	39.89		14.65	J	27.3	93	14.65
TO-15	Trichlorofluoromethane	2.1	3.8	2.26	U	2.67	U	2.5	-16.6	2.67
TO-15	Acetonitrile	1.2	4.1	1.33	U	1.57	U	1.5	-16.6	1.57
TO-15	Acetone	30	-161	364.04		253.32		309	36	253.32
TO-15	Methyl iodide	0.63	3.2	0.68	U	0.80	U	0.74	-16.2	0.80

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	Mean	RPD	SAMPLE	REPLICATE	Mean	RPD	REPLICATE			
				STA-4C-5	STA-4CR-5			STA-4CR-5			
				ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>			
TO-15	1,1-Dichloroethene	1.4	3.5	1.55	U	1.83	U	1.7	-16.6	1.83	U
TO-15	Freon 113	2.8	3.6	3.03	U	3.57	U	3.3	-16.4	3.57	U
TO-15	Dichloromethane	1.3	3.1	1.40	U	1.65	U	1.5	-16.4	1.65	U
TO-15	Carbon disulfide	1.0	4.2	1.31	J	1.23	J	1.3	6.3	1.23	J
TO-15	trans-1,2-Dichloroethene	0.94	4.3	1.02	U	1.20	U	1.11	-16.2	1.20	U
TO-15	Methyl tert butyl ether	1.2	58	0.95	U	1.12	U	1.0	-16	1.12	U
TO-15	1,1-Dichloroethane	1.5	3.4	1.58	U	1.87	U	1.7	-16.8	1.87	U
TO-15	Vinyl acetate	1.0	3.9	1.17	J	1.30	U	1.2	-10.5	1.30	U
TO-15	2-Butanone	8.5	-176	230.72		109.64		170.2	71	109.64	
TO-15	Bromochloromethane	0.9	3.2	1.00	U	1.18	U	1.1	-16.5	1.18	U
TO-15	Isobutyl alcohol	0.8	3.6	0.89	U	1.05	U	1.0	-16.5	1.05	U
TO-15	cis-1,2-Dichloroethene	1.5	4.1	1.58	U	1.87	U	1.7	-16.8	1.87	U
TO-15	2,2-Dichloropropane	1.4	3.7	1.47	U	1.73	U	1.6	-16.3	1.73	U
TO-15	Chloroform	9.1	-154	137.30		146.62		142.0	-6.6	146.62	
TO-15	1,1,1-Trichloroethane	2.0	4.0	2.15	U	2.54	U	2.3	-16.6	2.54	U
TO-15	1,2-Dichloroethane	1.5	4.0	1.61	U	1.91	U	1.8	-17.0	1.91	U
TO-15	1,1-Dichloropropene	1.0	3.0	1.07	U	1.26	U	1.2	-16.3	1.26	U
TO-15	Benzene	2.8	-30	7.35		3.97	J	5.7	60	3.97	J
TO-15	Carbon tetrachloride	2.3	3.9	3.96	J	3.87	J	3.9	2.3	3.87	J
TO-15	n-Heptane	1.0	-30	8.57		6.04		7.3	35	6.04	
TO-15	1,2-Dichloropropane	1.7	3.5	1.84	U	2.17	U	2.0	-16.5	2.17	U
TO-15	1,4 Dioxane	2.4	3.7	2.62	U	3.10	U	2.9	-16.8	3.10	U
TO-15	Dibromomethane	0.88	4.5	0.95	U	1.12	U	1.04	-16.4	1.12	U
TO-15	Trichloroethene	2.0	3.5	2.14	U	2.53	U	2.3	-16.7	2.53	U
TO-15	Bromodichloromethane	0.89	3.4	0.96	U	1.13	U	1.05	-16.3	1.13	U
TO-15	Methyl Isobutyl Ketone	1.3	-39	7.56		1.31	J	4.4	141	1.31	J
TO-15	cis-1,3-Dichloropropene	1.7	3.5	1.86	U	2.20	U	2.0	-16.7	2.20	U
TO-15	Toluene	3.0	-107	7.00	J	10.65		8.8	-41	10.65	
TO-15	trans-1,3-Dichloropropene	1.7	3.6	1.83	U	2.16	U	2.0	-16.5	2.16	U
TO-15	1,1,2-Trichloroethane	2.0	4.0	2.15	U	2.54	U	2.3	-16.6	2.54	U
TO-15	2-Hexanone	1.7	-82	39.53		26.83		33.2	38	26.83	
TO-15	1,3-Dichloropropane	1.0	4.0	1.08	U	1.28	U	1.2	-16.9	1.28	U
TO-15	Dibromochloromethane	1.1	3.6	1.21	U	1.43	U	1.3	-16.7	1.43	U
TO-15	1,2-Dibromoethane	2.9	3.5	3.09	U	3.65	U	3.4	-16.6	3.65	U
TO-15	Tetrachloroethene	6.4	-122	2.68	U	3.16	U	2.9	-16	3.16	U

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	Mean	RPD	SAMPLE	REPLICATE	Mean	RPD	REPLICATE			
				STA-4C-5	STA-4CR-5			STA-4CR-5			
				ug/m <sup>3</sup>	ug/m <sup>3</sup>			ug/m <sup>3</sup>			
TO-15	Chlorobenzene	1.7	3.6	1.82	U	2.15	U	2.0	-16.6	2.15	U
TO-15	1,1,1,2-Tetrachloroethane	0.9	3.2	1.01	U	1.19	U	1.1	-16.4	1.19	U
TO-15	Ethylbenzene	1.6	3.1	1.75	U	2.59	J	2.2	-38.7	2.59	J
TO-15	m & p-Xylene	3.4	-9.4	4.40	J	19.87	J	12.1	-127.5	19.87	J
TO-15	Styrene	1.6	3.8	1.70	U	2.01	U	1.9	-16.7	2.01	U
TO-15	Bromoform	0.9	3.3	0.99	U	1.17	U	1.1	-16.7	1.17	U
TO-15	o-Xylene	1.6	3.2	2.02	J	9.14	J	5.6	-127.6	9.14	J
TO-15	1,1,2,2-Tetrachloroethane	2.5	3.6	2.71	U	3.20	U	3.0	-16.6	3.20	U
TO-15	1,2,3-Trichloropropane	1.0	3.1	1.06	U	1.25	U	1.2	-16.5	1.25	U
TO-15	n-Propylbenzene	1.2	3.3	1.31	U	1.77	J	1.5	-29.9	1.77	J
TO-15	Isopropylbenzene	1.2	3.3	1.33	U	<b>14.65</b>		8.0	-166.7	<b>14.65</b>	
TO-15	1,3,5-Trimethylbenzene	1.9	3.8	2.02	U	5.34	J	3.7	-90.2	5.34	J
TO-15	tert-butyl benzene	1.2	3.3	1.30	U	2.72	J	2.0	-70.6	2.72	J
TO-15	1,2,4-Trimethylbenzene	1.8	3.9	2.15	J	<b>17.05</b>		9.6	-155.2	<b>17.05</b>	
TO-15	sec-butylbenzene	1.3	3.9	1.38	U	1.63	U	1.5	-16.6	1.63	U
TO-15	1,3-Dichlorobenzene	2.2	3.7	2.37	U	2.80	U	2.6	-16.6	2.80	U
TO-15	Isopropyltoluene	1.3	4.0	1.36	U	1.60	U	1.5	-16.2	1.60	U
TO-15	Benzyl chloride	2.2	3.7	2.36	U	2.78	U	2.6	-16.3	2.78	U
TO-15	1,4-Dichlorobenzene	4.4	3.4	4.75	U	5.60	U	5.2	-16.4	5.60	U
TO-15	n-Butylbenzene	2.4	3.8	2.55	U	3.01	U	2.8	-16.5	3.01	U
TO-15	1,2-Dichlorobenzene	4.3	3.7	14.07	J	5.49	U	9.8	87.7	5.49	U
TO-15	1,2-Dibromo-3-chloropropane	12	3.5	12.54	U	14.79	U	14	-16.5	14.79	U
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	5.8	-9.4	5.92	U	6.98	U	6.5	-16.4	6.98	U
TO-15	Hexachlorobutadiene	7.9	3.7	8.51	U	10.04	U	9.3	-16.5	10.04	U

Bold- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	DUPLICATE		Mean	RPD	SAMPLE		REPLICATE		Mean	RPD
		STA-4C-5-DUP	ug/m <sup>3</sup>			STA-4C-10	ug/m <sup>3</sup>	STA-4CR-10	ug/m <sup>3</sup>		
ASTM 1946	% Helium Trace Gas	0.028	J	5	199	0.046	J	0.560		0.30	-170
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.311	U	0.32	2.9	0.304	U	1.683	J	0.99	-138.8
TO-15 SIM	1,3-Dichlorobenzene	0.272	U	0.28	2.9	0.266	U	0.671	J	0.47	-86.4
TO-15 SIM	Benzyl chloride	0.128	U	0.13	3.1	0.125	U	1.200	J	0.66	-162.3
TO-15 SIM	1,4-Dichlorobenzene	0.272	U	0.28	2.9	0.266	U	0.515	J	0.39	-63.8
TO-15 SIM	1,2-Dichlorobenzene	0.267	U	0.27	3.0	0.261	U	0.912	J	0.59	-111.0
TO-15 SIM	Hexachlorobutadiene	0.488	U	0.50	2.8	0.476	U	1.724	J	1.10	-113.5
TO-15 SIM	Naphthalene	0.521	U	0.7	42.4	0.707	J	3.001		1.9	-123.7
TO-15 SIM	1,2,3-Trichloropropane	0.243	U	0.25	2.8	0.237	U	2.924	J	1.58	-170.0
TO-15 SIM	Vinyl chloride	0.118	U	0.12	2.5	0.211	J	0.160	U	0.19	27.5
TO-15 SIM	Dichloromethane	0.528	J	0.47	-27	2.082		1.692		1.89	21
TO-15 SIM	Chloroform	147.947	E	95.7	-109	250.450	E	246.687	E	248.6	1.5
TO-15 SIM	1,2-Dichloroethane	0.185	U	0.19	3.2	0.181	U	0.251	U	0.22	-32.4
TO-15 SIM	Benzene	2.469		1.8	-67	15.075		7.347		11.2	69
TO-15 SIM	Carbon tetrachloride	4.548		3.47	-62	6.550		6.359		6.45	3.0
TO-15 SIM	1,2-Dichloropropane	0.211	U	0.21	2.8	0.206	U	0.286	U	0.25	-32.5
TO-15 SIM	Trichloroethene	0.246	U	0.27	16	1.150	J	0.333	U	0.74	110
TO-15 SIM	Bromodichloromethane	0.110	U	0.112	2.7	0.107	U	0.333	J	0.220	-102.7
TO-15 SIM	1,2-Dibromoethane	0.355	U	0.36	2.8	0.347	U	0.481	U	0.41	-32.4
TO-15 SIM	1,1,2-Trichloroethane	0.247	U	0.25	2.8	0.241	U	0.335	U	0.29	-32.6
TO-15 SIM	Tetrachloroethene	1.014	J	0.9	-27	1.592		1.239	J	1.4	25
TO-15 SIM	Dibromochloromethane	0.278	U	0.28	2.8	0.272	U	0.377	U	0.32	-32.4
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.772	J	1.1	63.1	1.344	J	17.285		9.3	-171.1
		ug/m <sup>3</sup>				ug/m <sup>3</sup>		ug/m <sup>3</sup>			
ASTM 1946	% Helium Trace Gas	0.028	J	5	199	0.046	J	0.560		0	-170
TO-15	Dichlorodifluoromethane	2.31	U	2.7	30	2.25	U	3.12	U	2.7	-32
TO-15	Chloromethane	0.94	U	1.4	68.1	0.91	U	1.27	U	1.1	-33.0
TO-15	Vinyl chloride	1.18	U	1.2	2.5	1.15	U	1.60	U	1.4	-32.7
TO-15	Bromomethane	1.79	U	1.8	2.8	1.75	U	2.43	U	2.1	-32.5
TO-15	Chloroethane	1.22	U	1.3	11.6	1.19	U	1.65	U	1.4	-32.4
TO-15	Ethanol	2.88	U	8.8	134	2.81	U	3.90	U	3.4	-32
TO-15	Trichlorofluoromethane	2.59	U	2.6	3.0	2.53	U	3.52	U	3.0	-32.7
TO-15	Acetonitrile	1.52	U	1.5	3.2	1.49	U	2.06	U	1.8	-32.1
TO-15	Acetone	234.72		244	7.6	586.26		833.99		710	-35
TO-15	Methyl iodide	0.78	U	0.79	2.5	1.39	J	1.22	J	1.31	13.0

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	DUPLICATE	Mean	RPD	SAMPLE	REPLICATE	Mean	RPD
		STA-4C-5-DUP			STA-4C-10			
		ug/m <sup>3</sup>			ug/m <sup>3</sup>			
TO-15	1,1-Dichloroethene	1.78	U	1.8	2.8 1.74	U 2.41	U 2.1	-32.3
TO-15	Freon 113	3.47	U	3.5	2.8 3.39	U 4.70	U 4.0	-32.4
TO-15	Dichloromethane	1.60	U	1.6	3.1 1.57	U 2.17	U 1.9	-32.1
TO-15	Carbon disulfide	1.18	U	1.2	4.1 2.90	J 1.83	J 2.4	45.2
TO-15	trans-1,2-Dichloroethene	1.17	U	1.19	2.5 1.14	U 1.58	U 1.36	-32.4
TO-15	Methyl tert butyl ether	1.09	U	1.1	2.7 1.06	U 1.47	U 1.3	-32
TO-15	1,1-Dichloroethane	1.82	U	1.8	2.7 1.77	U 2.46	U 2.1	-32.6
TO-15	Vinyl acetate	1.26	U	1.3	3.1 1.24	U 1.71	U 1.5	-31.9
TO-15	2-Butanone	101.86		105.8	7.4 248.03	294.64		271.3 -17
TO-15	Bromochloromethane	1.15	U	1.2	2.6 1.12	U 1.56	U 1.3	-32.8
TO-15	Isobutyl alcohol	1.02	U	1.0	2.9 1.00	U 1.39	U 1.2	-32.6
TO-15	cis-1,2-Dichloroethene	1.81	U	1.8	3.3 1.77	U 2.46	U 2.1	-32.6
TO-15	2,2-Dichloropropane	1.68	U	1.7	2.9 1.64	U 2.28	U 2.0	-32.7
TO-15	Chloroform	153.94		150.3	-4.9 239.03	184.85		211.9 26
TO-15	1,1,1-Trichloroethane	2.47	U	2.5	2.8 2.41	U 3.35	U 2.9	-32.6
TO-15	1,2-Dichloroethane	1.85	U	1.9	3.2 1.81	U 2.51	U 2.2	-32.4
TO-15	1,1-Dichloropropene	1.22	U	1.2	3.2 1.19	U 1.65	U 1.4	-32.4
TO-15	Benzene	3.07	J	3.5	26 18.72	5.02	J 11.9	115
TO-15	Carbon tetrachloride	3.89	J	3.9	-0.52 5.95	J 3.86	U 4.9	42.6
TO-15	n-Heptane	5.70		5.9	5.79 19.04	10.65		14.8 57
TO-15	1,2-Dichloropropane	2.11	U	2.1	2.8 2.06	U 2.86	U 2.5	-32.5
TO-15	1,4 Dioxane	3.01	U	3.1	2.9 2.94	U 4.07	U 3.5	-32.2
TO-15	Dibromomethane	1.09	U	1.11	2.7 1.07	U 1.48	U 1.28	-32.2
TO-15	Trichloroethene	2.46	U	2.5	2.8 2.40	U 3.33	U 2.9	-32.5
TO-15	Bromodichloromethane	1.10	U	1.12	2.7 1.07	U 1.49	U 1.28	-32.8
TO-15	Methyl Isobutyl Ketone	1.27	U	1.3	3.1 1.24	U 1.72	U 1.5	-32
TO-15	cis-1,3-Dichloropropene	2.14	U	2.2	2.8 2.09	U 2.89	U 2.5	-32.1
TO-15	Toluene	2.24	J	6.4	130 88.19	6.51	J 47.4	173
TO-15	trans-1,3-Dichloropropene	2.10	U	2.1	2.8 2.05	U 2.84	U 2.4	-32.3
TO-15	1,1,2-Trichloroethane	2.47	U	2.5	2.8 2.41	U 3.35	U 2.9	-32.6
TO-15	2-Hexanone	33.62		30.2	-22 47.90	49.90		48.9 -4.1
TO-15	1,3-Dichloropropane	1.24	U	1.3	3.2 1.21	U 1.68	U 1.4	-32.5
TO-15	Dibromochloromethane	1.39	U	1.4	2.8 1.36	U 1.88	U 1.6	-32.1
TO-15	1,2-Dibromoethane	3.55	U	3.6	2.8 3.47	U 4.81	U 4.1	-32.4
TO-15	Tetrachloroethene	3.07	U	3.1	3 3.00	U 4.16	U 3.6	-32

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	DUPLICATE	Mean	RPD	SAMPLE	REPLICATE	Mean	RPD
		STA-4C-5-DUP			STA-4C-10			
		ug/m <sup>3</sup>			ug/m <sup>3</sup>			
TO-15	Chlorobenzene	2.09	U	2.1	2.8	2.04	U	2.83
TO-15	1,1,1,2-Tetrachloroethane	1.16	U	1.2	2.6	1.13	U	1.57
TO-15	Ethylbenzene	2.01	U	2.3	25.2	2.99	J	2.72
TO-15	m & p-Xylene	3.97	U	11.9	133.4	7.10	J	5.38
TO-15	Styrene	1.95	U	2.0	3.0	1.90	U	2.64
TO-15	Bromoform	1.13	U	1.2	3.5	1.11	U	1.54
TO-15	o-Xylene	1.97	U	5.6	129.1	2.46	J	2.66
TO-15	1,1,2,2-Tetrachloroethane	3.11	U	3.2	2.9	3.04	U	4.21
TO-15	1,2,3-Trichloropropane	1.21	U	1.2	3.3	1.18	U	1.64
TO-15	n-Propylbenzene	1.51	U	1.6	15.9	1.47	U	2.04
TO-15	Isopropylbenzene	1.53	U	8.1	162.2	1.49	U	2.07
TO-15	1,3,5-Trimethylbenzene	2.31	U	3.8	79.2	2.26	U	3.13
TO-15	tert-butyl benzene	1.49	U	2.1	58.4	1.45	U	2.01
TO-15	1,2,4-Trimethylbenzene	2.23	U	9.6	153.7	2.17	U	3.02
TO-15	sec-butylbenzene	1.58	U	1.6	3.1	1.55	U	2.15
TO-15	1,3-Dichlorobenzene	2.72	U	2.8	2.9	2.66	U	3.69
TO-15	Isopropyltoluene	1.56	U	1.6	2.5	1.52	U	2.11
TO-15	Benzyl chloride	2.70	U	2.7	2.9	2.64	U	3.66
TO-15	1,4-Dichlorobenzene	5.45	U	5.5	2.7	5.32	U	7.38
TO-15	n-Butylbenzene	2.92	U	3.0	3.0	2.86	U	3.96
TO-15	1,2-Dichlorobenzene	5.34	U	5.4	2.8	5.21	U	7.23
TO-15	1,2-Dibromo-3-chloropropane	14.37	U	15	2.9	14.04	U	19.47
TO-15 SIM	1,2,4-Trichlorobenzene	6.79	U	6.9	2.8	6.63	U	9.19
TO-15	Hexachlorobutadiene	9.76	U	9.9	2.8	9.53	U	13.22

Bold- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	REPLICATE	DUPLICATE	Mean	RPD	
		STA-4CR-10	STA-4C-10-DUP			
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			
ASTM 1946	% Helium Trace Gas	0.560	0.595	1	-6.1	
TO-15 SIM	1,1,2,2-Tetrachloroethane	1.683	J 1.499	J 1.59	11.6	
TO-15 SIM	1,3-Dichlorobenzene	0.671	J 0.479	J 0.58	33.4	
TO-15 SIM	Benzyl chloride	1.200	J 0.178	U 0.69	148.3	
TO-15 SIM	1,4-Dichlorobenzene	0.515	J 0.450	J 0.48	13.5	
TO-15 SIM	1,2-Dichlorobenzene	0.912	J 0.780	J 0.85	15.6	
TO-15 SIM	Hexachlorobutadiene	1.724	J 2.978	J 2.35	-53.3	
TO-15 SIM	Naphthalene	3.001	9.276	6.1	-102.2	
TO-15 SIM	1,2,3-Trichloropropane	2.924	J 2.638	J 2.78	10.3	
TO-15 SIM	Vinyl chloride	0.160	U 0.163	U 0.16	-1.9	
TO-15 SIM	Dichloromethane	1.692	1.471	1.58	14	
TO-15 SIM	Chloroform	246.687	E 225.465	E 236.1	9.0	
TO-15 SIM	1,2-Dichloroethane	0.251	U 0.256	U 0.25	-2.0	
TO-15 SIM	Benzene	7.347	7.277	7.3	1.0	
TO-15 SIM	Carbon tetrachloride	6.359	6.120	6.24	3.8	
TO-15 SIM	1,2-Dichloropropane	0.286	U 0.292	U 0.29	-2.1	
TO-15 SIM	Trichloroethene	0.333	U 0.340	U 0.34	-2.1	
TO-15 SIM	Bromodichloromethane	0.333	J 0.152	U 0.243	74.6	
TO-15 SIM	1,2-Dibromoethane	0.481	U 0.491	U 0.49	-2.1	
TO-15 SIM	1,1,2-Trichloroethane	0.335	U 0.342	U 0.34	-2.1	
TO-15 SIM	Tetrachloroethene	1.239	J 1.127	J 1.2	9.5	
TO-15 SIM	Dibromochloromethane	0.377	U 0.385	U 0.38	-2.1	
TO-15 SIM	1,2-Dibromo-3-chloropropane	17.285	18.103	17.7	-4.6	
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			
ASTM 1946	% Helium Trace Gas	0.560	0.595	1	-6.1	
TO-15	Dichlorodifluoromethane	3.12	U 3.19	U 3.2	-2.2	
TO-15	Chloromethane	1.27	U 4.58	J 2.9	-113.2	
TO-15	Vinyl chloride	1.60	U 1.63	U 1.6	-1.9	
TO-15	Bromomethane	2.43	U 2.48	U 2.5	-2.0	
TO-15	Chloroethane	1.65	U 1.69	U 1.7	-2.4	
TO-15	Ethanol	3.90	U 3.98	U 3.9	-2.0	
TO-15	Trichlorofluoromethane	3.52	U 3.59	U 3.6	-2.0	
TO-15	Acetonitrile	2.06	U 2.11	U 2.1	-2.4	
TO-15	Acetone	833.99	155.28	495	137	
TO-15	Methyl iodide	1.22	J 1.08	U 1.15	12.2	

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	REPLICATE	DUPLICATE	Mean	RPD	
		STA-4CR-10	STA-4C-10-DUP			
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			
TO-15	1,1-Dichloroethene	2.41	U 2.46	U 2.4	-2.1	
TO-15	Freon 113	4.70	U 4.80	U 4.8	-2.1	
TO-15	Dichloromethane	2.17	U 2.22	U 2.2	-2.3	
TO-15	Carbon disulfide	1.83	J 4.12	J 3.0	-77.0	
TO-15	trans-1,2-Dichloroethene	1.58	U 1.62	U 1.60	-2.5	
TO-15	Methyl tert butyl ether	1.47	U 1.50	U 1.5	-2	
TO-15	1,1-Dichloroethane	2.46	U 2.51	U 2.5	-2.0	
TO-15	Vinyl acetate	1.71	U 1.75	U 1.7	-2.3	
TO-15	2-Butanone	294.64	32.64	163.6	160	
TO-15	Bromochloromethane	1.56	U 1.59	U 1.6	-1.9	
TO-15	Isobutyl alcohol	1.39	U 1.42	U 1.4	-2.1	
TO-15	cis-1,2-Dichloroethene	2.46	U 2.51	U 2.5	-2.0	
TO-15	2,2-Dichloropropane	2.28	U 2.33	U 2.3	-2.2	
TO-15	Chloroform	184.85	213.93	199.4	-15	
TO-15	1,1,1-Trichloroethane	3.35	U 3.42	U 3.4	-2.1	
TO-15	1,2-Dichloroethane	2.51	U 2.56	U 2.5	-2.0	
TO-15	1,1-Dichloropropene	1.65	U 1.69	U 1.7	-2.4	
TO-15	Benzene	5.02	J 5.58	J 5.3	-11	
TO-15	Carbon tetrachloride	3.86	U 4.27	J 4.1	-10.1	
TO-15	n-Heptane	10.65	7.97	9.3	29	
TO-15	1,2-Dichloropropane	2.86	U 2.92	U 2.9	-2.1	
TO-15	1,4 Dioxane	4.07	U 4.16	U 4.1	-2.2	
TO-15	Dibromomethane	1.48	U 1.51	U 1.50	-2.0	
TO-15	Trichloroethene	3.33	U 3.40	U 3.4	-2.1	
TO-15	Bromodichloromethane	1.49	U 1.52	U 1.51	-2.0	
TO-15	Methyl Isobutyl Ketone	1.72	U 1.75	U 1.7	-1.7	
TO-15	cis-1,3-Dichloropropene	2.89	U 2.96	U 2.9	-2.4	
TO-15	Toluene	6.51	J 5.24	J 5.9	22	
TO-15	trans-1,3-Dichloropropene	2.84	U 2.90	U 2.9	-2.1	
TO-15	1,1,2-Trichloroethane	3.35	U 3.42	U 3.4	-2.1	
TO-15	2-Hexanone	49.90	1.64	25.8	187	
TO-15	1,3-Dichloropropane	1.68	U 1.72	U 1.7	-2.4	
TO-15	Dibromochloromethane	1.88	U 1.92	U 1.9	-2.1	
TO-15	1,2-Dibromoethane	4.81	U 4.91	U 4.9	-2.1	
TO-15	Tetrachloroethene	4.16	U 4.25	U 4.2	-2.1	

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	REPLICATE	DUPLICATE	Mean	RPD	
		STA-4CR-10	STA-4C-10-DUP			
		ug/m <sup>3</sup>	ug/m <sup>3</sup>			
TO-15	<b>Chlorobenzene</b>	2.83	U 2.89	U 2.9	-2.1	
TO-15	<b>1,1,1,2-Tetrachloroethane</b>	1.57	U 1.61	U 1.6	-2.5	
TO-15	<b>Ethylbenzene</b>	2.72	U 2.78	U 2.8	-2.2	
TO-15	<b>m &amp; p-Xylene</b>	5.38	U 5.50	U 5.4	-2.2	
TO-15	<b>Styrene</b>	2.64	U 2.70	U 2.7	-2.2	
TO-15	<b>Bromoform</b>	1.54	U 1.57	U 1.6	-1.9	
TO-15	<b>o-Xylene</b>	2.66	U 2.72	U 2.7	-2.2	
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	4.21	U 4.30	U 4.3	-2.1	
TO-15	<b>1,2,3-Trichloropropane</b>	1.64	U 1.68	U 1.7	-2.4	
TO-15	<b>n-Propylbenzene</b>	2.04	U 2.08	U 2.1	-1.9	
TO-15	<b>Isopropylbenzene</b>	2.07	U 2.11	U 2.1	-1.9	
TO-15	<b>1,3,5-Trimethylbenzene</b>	3.13	U 3.20	U 3.2	-2.2	
TO-15	<b>tert-butyl benzene</b>	2.01	U 2.06	U 2.0	-2.5	
TO-15	<b>1,2,4-Trimethylbenzene</b>	3.02	U 3.08	U 3.1	-2.0	
TO-15	<b>sec-butylbenzene</b>	2.15	U 2.19	U 2.2	-1.8	
TO-15	<b>1,3-Dichlorobenzene</b>	3.69	U 3.77	U 3.7	-2.1	
TO-15	<b>Isopropyltoluene</b>	2.11	U 2.16	U 2.1	-2.3	
TO-15	<b>Benzyl chloride</b>	3.66	U 3.74	U 3.7	-2.2	
TO-15	<b>1,4-Dichlorobenzene</b>	7.38	U 7.53	U 7.5	-2.0	
TO-15	<b>n-Butylbenzene</b>	3.96	U 4.05	U 4.0	-2.2	
TO-15	<b>1,2-Dichlorobenzene</b>	7.23	U 7.39	U 7.3	-2.2	
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	19.47	U 19.89	U 20	-2.1	
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	9.19	U 9.39	U 9.3	-2.2	
TO-15	<b>Hexachlorobutadiene</b>	13.22	U 13.50	U 13.4	-2.1	

Bold- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	COMPOUND	STA-3C-Blank	STA-4C-Blank	
			ug/m <sup>3</sup>	ug/m <sup>3</sup>	
			Media Blank	Media Blank	
ASTM 1946	% Helium Trace Gas	% Helium Trace Gas	0.02	U	0.02 U
TO-15 SIM	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	0.112	U	0.048 U
TO-15 SIM	1,3-Dichlorobenzene	1,3-Dichlorobenzene	0.098	U	0.042 U
TO-15 SIM	Benzyl chloride	Benzyl chloride	0.046	U	0.020 U
TO-15 SIM	1,4-Dichlorobenzene	1,4-Dichlorobenzene	0.098	U	0.042 U
TO-15 SIM	1,2-Dichlorobenzene	1,2-Dichlorobenzene	0.096	U	0.043 J
TO-15 SIM	Hexachlorobutadiene	Hexachlorobutadiene	0.175	U	0.075 U
TO-15 SIM	Naphthalene	Naphthalene	0.514	J	0.186 J
TO-15 SIM	1,2,3-Trichloropropane	1,2,3-Trichloropropane	0.087	U	0.038 U
TO-15 SIM	Vinyl chloride	Vinyl chloride	0.042	U	0.018 U
TO-15 SIM	Dichloromethane	Dichloromethane	0.058	U	0.306
TO-15 SIM	Chloroform	Chloroform	0.079	U	0.048 J
TO-15 SIM	1,2-Dichloroethane	1,2-Dichloroethane	0.067	U	0.029 U
TO-15 SIM	Benzene	Benzene	0.344		0.216
TO-15 SIM	Carbon tetrachloride	Carbon tetrachloride	0.102	U	0.178 J
TO-15 SIM	1,2-Dichloropropane	1,2-Dichloropropane	0.076	U	0.033 U
TO-15 SIM	Trichloroethene	Trichloroethene	0.088	U	0.038 U
TO-15 SIM	Bromodichloromethane	Bromodichloromethane	0.040	U	0.017 U
TO-15 SIM	1,2-Dibromoethane	1,2-Dibromoethane	0.127	U	0.055 U
TO-15 SIM	1,1,2-Trichloroethane	1,1,2-Trichloroethane	0.089	U	0.038 U
TO-15 SIM	Tetrachloroethene	Tetrachloroethene	0.110	U	0.047 U
TO-15 SIM	Dibromochloromethane	Dibromochloromethane	0.100	U	0.043 U
TO-15 SIM	1,2-Dibromo-3-chloropropane	1,2-Dibromo-3-chloropropane	0.550		0.264
ASTM 1946	% Helium Trace Gas	% Helium Trace Gas	0.02	U	0.02 U
TO-15	Dichlorodifluoromethane	Dichlorodifluoromethane	0.38	U	0.36 U
TO-15	Chloromethane	Chloromethane	0.15	U	0.20 J
TO-15	Vinyl chloride	Vinyl chloride	0.19	U	0.18 U
TO-15	Bromomethane	Bromomethane	0.29	U	0.28 U
TO-15	Chloroethane	Chloroethane	0.20	U	0.19 U
TO-15	Ethanol	Ethanol	2.11	J	1.94 J
TO-15	Trichlorofluoromethane	Trichlorofluoromethane	0.43	U	0.40 U
TO-15	Acetonitrile	Acetonitrile	0.25	U	0.24 U
TO-15	Acetone	Acetone	6.16		4.55
TO-15	Methyl iodide	Methyl iodide	0.13	U	0.12 U

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	COMPOUND	STA-3C-Blank	STA-4C-Blank	
			ug/m <sup>3</sup>	ug/m <sup>3</sup>	
			Media Blank	Media Blank	
TO-15	1,1-Dichloroethene	1,1-Dichloroethene	0.29	U	0.27
TO-15	Freon 113	Freon 113	0.57	U	0.54
TO-15	Dichloromethane	Dichloromethane	0.26	U	0.25
TO-15	Carbon disulfide	Carbon disulfide	0.92	J	1.23
TO-15	trans-1,2-Dichloroethene	trans-1,2-Dichloroethene	0.19	U	0.18
TO-15	Methyl tert butyl ether	Methyl tert butyl ether	0.18	U	0.17
TO-15	1,1-Dichloroethane	1,1-Dichloroethane	0.30	U	0.28
TO-15	Vinyl acetate	Vinyl acetate	0.21	U	0.20
TO-15	2-Butanone	2-Butanone	1.91		1.60
TO-15	Bromoform	Bromoform	0.19	U	0.18
TO-15	Isobutyl alcohol	Isobutyl alcohol	0.17	U	0.16
TO-15	cis-1,2-Dichloroethene	cis-1,2-Dichloroethene	0.30	U	0.28
TO-15	2,2-Dichloropropane	2,2-Dichloropropane	0.28	U	0.26
TO-15	Chloroform	Chloroform	0.36	U	0.34
TO-15	1,1,1-Trichloroethane	1,1,1-Trichloroethane	0.41	U	0.38
TO-15	1,2-Dichloroethane	1,2-Dichloroethane	0.30	U	0.29
TO-15	1,1-Dichloropropene	1,1-Dichloropropene	0.20	U	0.19
TO-15	Benzene	Benzene	0.30	J	0.26
TO-15	Carbon tetrachloride	Carbon tetrachloride	0.47	U	0.44
TO-15	n-Heptane	n-Heptane	0.17	U	0.16
TO-15	1,2-Dichloropropane	1,2-Dichloropropane	0.35	U	0.33
TO-15	1,4 Dioxane	1,4 Dioxane	0.49	U	0.47
TO-15	Dibromomethane	Dibromomethane	0.18	U	0.17
TO-15	Trichloroethene	Trichloroethene	0.40	U	0.38
TO-15	Bromodichloromethane	Bromodichloromethane	0.18	U	0.17
TO-15	Methyl Isobutyl Ketone	Methyl Isobutyl Ketone	0.21	U	0.20
TO-15	cis-1,3-Dichloropropene	cis-1,3-Dichloropropene	0.35	U	0.33
TO-15	Toluene	Toluene	0.28	U	0.27
TO-15	trans-1,3-Dichloropropene	trans-1,3-Dichloropropene	0.34	U	0.32
TO-15	1,1,2-Trichloroethane	1,1,2-Trichloroethane	0.41	U	0.38
TO-15	2-Hexanone	2-Hexanone	0.19	U	0.18
TO-15	1,3-Dichloropropane	1,3-Dichloropropane	0.20	U	0.19
TO-15	Dibromochloromethane	Dibromochloromethane	0.23	U	0.21
TO-15	1,2-Dibromoethane	1,2-Dibromoethane	0.58	U	0.55
TO-15	Tetrachloroethene	Tetrachloroethene	0.50	U	0.47

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	COMPOUND	STA-3C-Blank	STA-4C-Blank	
			ug/m <sup>3</sup>	ug/m <sup>3</sup>	
			Media Blank	Media Blank	
TO-15	<b>Chlorobenzene</b>	<b>Chlorobenzene</b>	0.34	U 0.32	U
TO-15	<b>1,1,1,2-Tetrachloroethane</b>	<b>1,1,1,2-Tetrachloroethane</b>	0.19	U 0.18	U
TO-15	<b>Ethylbenzene</b>	<b>Ethylbenzene</b>	0.33	U 0.31	U
TO-15	<b>m &amp; p-Xylene</b>	<b>m &amp; p-Xylene</b>	0.65	U 0.61	U
TO-15	<b>Styrene</b>	<b>Styrene</b>	0.32	U 0.30	U
TO-15	<b>Bromoform</b>	<b>Bromoform</b>	0.19	U 0.18	U
TO-15	<b>o-Xylene</b>	<b>o-Xylene</b>	0.32	U 0.30	U
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	<b>1,1,2,2-Tetrachloroethane</b>	0.51	U 0.48	U
TO-15	<b>1,2,3-Trichloropropane</b>	<b>1,2,3-Trichloropropane</b>	0.20	U 0.19	U
TO-15	<b>n-Propylbenzene</b>	<b>n-Propylbenzene</b>	0.25	U 0.23	U
TO-15	<b>Isopropylbenzene</b>	<b>Isopropylbenzene</b>	0.25	U 0.24	U
TO-15	<b>1,3,5-Trimethylbenzene</b>	<b>1,3,5-Trimethylbenzene</b>	0.38	U 0.36	U
TO-15	<b>tert-butyl benzene</b>	<b>tert-butyl benzene</b>	0.24	U 0.23	U
TO-15	<b>1,2,4-Trimethylbenzene</b>	<b>1,2,4-Trimethylbenzene</b>	0.37	U 0.34	U
TO-15	<b>sec-butylbenzene</b>	<b>sec-butylbenzene</b>	0.26	U 0.24	U
TO-15	<b>1,3-Dichlorobenzene</b>	<b>1,3-Dichlorobenzene</b>	0.45	U 0.42	U
TO-15	<b>Isopropyltoluene</b>	<b>Isopropyltoluene</b>	0.26	U 0.24	U
TO-15	<b>Benzyl chloride</b>	<b>Benzyl chloride</b>	0.44	U 0.42	U
TO-15	<b>1,4-Dichlorobenzene</b>	<b>1,4-Dichlorobenzene</b>	0.89	U 0.84	U
TO-15	<b>n-Butylbenzene</b>	<b>n-Butylbenzene</b>	0.48	U 0.45	U
TO-15	<b>1,2-Dichlorobenzene</b>	<b>1,2-Dichlorobenzene</b>	0.88	U 0.83	U
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	<b>1,2-Dibromo-3-chloropropane</b>	2.36	U 2.22	U
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	<b>1,2,4-Trichlorobenzene</b>	1.11	U 1.05	U
TO-15	<b>Hexachlorobutadiene</b>	<b>Hexachlorobutadiene</b>	1.60	U 1.51	U

**Bold**- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	QC QUAL	
		ug/m <sup>3</sup>	
ASTM 1946	% Helium Trace Gas	0.02	U
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.036	U
TO-15 SIM	1,3-Dichlorobenzene	0.032	U
TO-15 SIM	Benzyl chloride	0.015	U
TO-15 SIM	1,4-Dichlorobenzene	0.032	U
TO-15 SIM	1,2-Dichlorobenzene	0.031	U
TO-15 SIM	Hexachlorobutadiene	0.057	U
TO-15 SIM	Naphthalene	0.514	J
TO-15 SIM	1,2,3-Trichloropropane	0.028	U
TO-15 SIM	Vinyl chloride	0.014	U
TO-15 SIM	Dichloromethane	0.019	U
TO-15 SIM	Chloroform	0.026	U
TO-15 SIM	1,2-Dichloroethane	0.022	U
TO-15 SIM	Benzene	0.344	
TO-15 SIM	Carbon tetrachloride	0.033	U
TO-15 SIM	1,2-Dichloropropane	0.025	U
TO-15 SIM	Trichloroethene	0.029	U
TO-15 SIM	Bromodichloromethane	0.013	U
TO-15 SIM	1,2-Dibromoethane	0.041	U
TO-15 SIM	1,1,2-Trichloroethane	0.029	U
TO-15 SIM	Tetrachloroethene	0.036	U
TO-15 SIM	Dibromochloromethane	0.032	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.550	
		ug/m <sup>3</sup>	
ASTM 1946	% Helium Trace Gas	0.02	U
TO-15	Dichlorodifluoromethane	0.27	U
TO-15	Chloromethane	0.76	
TO-15	Vinyl chloride	0.14	U
TO-15	Bromomethane	0.21	U
TO-15	Chloroethane	0.14	U
TO-15	Ethanol	2.11	J
TO-15	Trichlorofluoromethane	0.30	U
TO-15	Acetonitrile	0.18	U
TO-15	Acetone	6.16	
TO-15	Methyl iodide	0.09	U

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	QC QUAL	
		ug/m <sup>3</sup>	
TO-15	1,1-Dichloroethene	0.21	U
TO-15	Freon 113	0.40	U
TO-15	Dichloromethane	0.19	U
TO-15	Carbon disulfide	0.14	U
TO-15	trans-1,2-Dichloroethene	0.14	U
TO-15	Methyl tert butyl ether	0.13	U
TO-15	1,1-Dichloroethane	0.21	U
TO-15	Vinyl acetate	0.15	U
TO-15	2-Butanone	1.91	
TO-15	Bromochloromethane	0.13	U
TO-15	Isobutyl alcohol	0.12	U
TO-15	cis-1,2-Dichloroethene	0.21	U
TO-15	2,2-Dichloropropane	0.20	U
TO-15	Chloroform	0.26	U
TO-15	1,1,1-Trichloroethane	0.29	U
TO-15	1,2-Dichloroethane	0.22	U
TO-15	1,1-Dichloropropene	0.14	U
TO-15	Benzene	0.30	J
TO-15	Carbon tetrachloride	0.33	U
TO-15	n-Heptane	0.12	U
TO-15	1,2-Dichloropropane	0.25	U
TO-15	1,4 Dioxane	0.35	U
TO-15	Dibromomethane	0.13	U
TO-15	Trichloroethene	0.29	U
TO-15	Bromodichloromethane	0.13	U
TO-15	Methyl Isobutyl Ketone	0.15	U
TO-15	cis-1,3-Dichloropropene	0.25	U
TO-15	Toluene	0.24	J
TO-15	trans-1,3-Dichloropropene	0.24	U
TO-15	1,1,2-Trichloroethane	0.29	U
TO-15	2-Hexanone	0.14	J
TO-15	1,3-Dichloropropane	0.14	U
TO-15	Dibromochloromethane	0.16	U
TO-15	1,2-Dibromoethane	0.41	U
TO-15	Tetrachloroethene	0.36	U

Table 2B. Summary of Soil Gas Replicate and Duplicate Data With RPD QC Data, and Media Blank Data (ug/m<sup>3</sup>).

METHOD	COMPOUND	QC QUAL	
		ug/m <sup>3</sup>	
TO-15	<b>Chlorobenzene</b>	0.24	U
TO-15	<b>1,1,1,2-Tetrachloroethane</b>	0.13	U
TO-15	<b>Ethylbenzene</b>	0.23	U
TO-15	<b>m &amp; p-Xylene</b>	0.46	U
TO-15	<b>Styrene</b>	0.23	U
TO-15	<b>Bromoform</b>	0.13	U
TO-15	<b>o-Xylene</b>	0.23	U
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	0.36	U
TO-15	<b>1,2,3-Trichloropropane</b>	0.14	U
TO-15	<b>n-Propylbenzene</b>	0.18	U
TO-15	<b>Isopropylbenzene</b>	0.18	U
TO-15	<b>1,3,5-Trimethylbenzene</b>	0.27	U
TO-15	<b>tert-butyl benzene</b>	0.17	U
TO-15	<b>1,2,4-Trimethylbenzene</b>	<b>0.28</b>	J
TO-15	<b>sec-butylbenzene</b>	0.18	U
TO-15	<b>1,3-Dichlorobenzene</b>	0.32	U
TO-15	<b>Isopropyltoluene</b>	0.18	U
TO-15	<b>Benzyl chloride</b>	0.31	U
TO-15	<b>1,4-Dichlorobenzene</b>	0.63	U
TO-15	<b>n-Butylbenzene</b>	0.34	U
TO-15	<b>1,2-Dichlorobenzene</b>	0.62	U
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	1.67	U
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	0.79	U
TO-15	<b>Hexachlorobutadiene</b>	1.13	U

**Bold**- flux levels above reporting limits (RL)

J- flux level above MDL but below RL

U- Flux level below MDL

B- compound found in lab blank

Flux = (ug/m<sup>3</sup>)(0.005 m<sup>3</sup>/min)/(0.13 m<sup>2</sup>)

R- sample replicate

Yellow highlighted samples indicate one or more samples reported above RL for the data set.

RPD- Relative Percent Difference

Color coding is an attempt to separate VOC data from Helium, and 5' depth (lighter brown) and 10' depth (darker brown) soil gas data

Helium data is in percent (%)- note exceedance of 3% criteria highlighted in red

Table 3-3N. Summary Data for Station3 Location North.

METHOD	COMPOUND	SF-3N		SF-3N		STA-3N-5		STA-3N-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.040		1.456	
TO-15 SIM	<b>1,1,2,2-Tetrachloroethane</b>	0.047	U	0.00181	U	0.513	U	0.295	U
TO-15 SIM	<b>1,3-Dichlorobenzene</b>	0.041	U	0.00158	U	0.450	U	0.258	U
TO-15 SIM	<b>Benzyl chloride</b>	0.020	U	0.00077	U	0.212	U	0.122	U
TO-15 SIM	<b>1,4-Dichlorobenzene</b>	0.041	U	0.00158	U	0.450	U	0.258	U
TO-15 SIM	<b>1,2-Dichlorobenzene</b>	0.041	U	0.00158	U	0.441	U	0.253	U
TO-15 SIM	<b>Hexachlorobutadiene</b>	0.074	U	0.00285	U	0.805	U	0.462	U
TO-15 SIM	<b>Naphthalene</b>	0.102	J	0.00393	J	1.635	J	1.570	J
TO-15 SIM	<b>1,2,3-Trichloropropane</b>	0.037	U	0.00142	U	0.401	U	0.230	U
TO-15 SIM	<b>Vinyl chloride</b>	0.018	U	0.00069	U	0.195	U	0.112	U
TO-15 SIM	<b>Dichloromethane</b>	0.033	J	0.00127	J	<b>1.978</b>		<b>4.081</b>	
TO-15 SIM	<b>Chloroform</b>	<b>1.671</b>		<b>0.0643</b>		<b>940.497</b>	E	<b>2,490.738</b>	E
TO-15 SIM	<b>1,2-Dichloroethane</b>	0.028	U	0.00108	U	0.306	U	<b>1.741</b>	
TO-15 SIM	<b>Benzene</b>	<b>0.169</b>		<b>0.00651</b>		<b>3.676</b>		<b>9.403</b>	
TO-15 SIM	<b>Carbon tetrachloride</b>	0.049	J	0.00189	J	<b>28.052</b>		<b>62.941</b>	
TO-15 SIM	<b>1,2-Dichloropropane</b>	0.032	U	0.00123	U	0.349	U	0.200	U
TO-15 SIM	<b>Trichloroethylene</b>	0.037	U	0.00142	U	0.406	U	<b>1.534</b>	
TO-15 SIM	<b>Bromodichloromethane</b>	0.017	U	0.000655	U	0.182	U	0.104	U
TO-15 SIM	<b>1,2-Dibromoethane</b>	0.054	U	0.00208	U	0.586	U	0.336	U
TO-15 SIM	<b>1,1,2-Trichloroethane</b>	0.038	U	0.00146	U	0.408	U	0.234	U
TO-15 SIM	<b>Tetrachloroethene</b>	0.047	U	0.00181	U	<b>6.119</b>		<b>5.142</b>	
TO-15 SIM	<b>Dibromochloromethane</b>	0.042	U	0.00162	U	0.460	U	0.264	U
TO-15 SIM	<b>1,2-Dibromo-3-chloropropane</b>	0.114	J	<b>0.00439</b>	J	1.392	J	1.059	J
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.040		1.456	
TO-15	<b>Dichlorodifluoromethane</b>	0.35	U	0.0135	U	3.81	U	21.85	U
TO-15	<b>Chloromethane</b>	0.14	U	0.00539	U	1.54	U	8.86	U
TO-15	<b>Vinyl chloride</b>	0.18	U	0.00693	U	1.95	U	11.19	U
TO-15	<b>Bromomethane</b>	0.27	U	0.0104	U	2.96	U	16.98	U
TO-15	<b>Chloroethane</b>	0.19	U	0.00732	U	2.01	U	11.54	U
TO-15	<b>Ethanol</b>	<b>2.25</b>		<b>0.0866</b>		7.61	J	52.16	J
TO-15	<b>Trichlorofluoromethane</b>	0.40	U	0.0154	U	4.28	U	24.59	U
TO-15	<b>Acetonitrile</b>	0.23	U	0.00886	U	2.51	U	14.43	U
TO-15	<b>Acetone</b>	<b>9.66</b>		<b>0.372</b>		<b>89.36</b>		<b>595.89</b>	
TO-15	<b>Methyl iodide</b>	0.12	U	0.00462	U	1.29	U	7.38	U
TO-15	<b>1,1-Dichloroethene</b>	0.27	U	0.0104	U	2.93	U	16.84	U

Table 3-3N. Summary Data for Station3 Location North.

METHOD	COMPOUND	SF-3N		SF-3N		STA-3N-5		STA-3N-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
TO-15	Freon 113	0.53	U	0.0204	U	5.73	U	32.88	U
TO-15	Dichloromethane	0.24	U	0.00924	U	2.65	U	15.19	U
TO-15	Carbon disulfide	0.20	J	0.00770	J	1.95	U	13.33	J
TO-15	trans-1,2-Dichloroethene	0.18	U	0.00693	U	1.93	U	11.07	U
TO-15	Methyl tert butyl ether	0.17	U	0.00655	U	1.79	U	10.29	U
TO-15	1,1-Dichloroethane	0.28	U	0.0108	U	3.00	U	17.21	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	2.09	U	11.99	U
TO-15	2-Butanone	4.36		0.168		27.49		309.96	
TO-15	Bromochloromethane	0.18	U	0.00693	U	1.90	U	10.91	U
TO-15	Isobutyl alcohol	0.16	U	0.00616	U	1.69	U	9.69	U
TO-15	cis-1,2-Dichloroethene	0.28	U	0.0108	U	2.99	U	17.18	U
TO-15	2,2-Dichloropropane	0.26	U	0.0100	U	2.77	U	15.93	U
TO-15	Chloroform	1.24	J	0.0477	J	1,265.77		2,685.70	
TO-15	1,1,1-Trichloroethane	0.38	U	0.0146	U	4.08	U	23.42	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	3.06	U	17.55	U
TO-15	1,1-Dichloropropene	0.19	U	0.00732	U	2.02	U	11.58	U
TO-15	Benzene	0.27	J	0.0104	J	4.59	J	16.36	J
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	28.23		45.53	J
TO-15	n-Heptane	0.15	U	0.00578	U	9.12		25.70	J
TO-15	1,2-Dichloropropane	0.32	U	0.0123	U	3.49	U	20.03	U
TO-15	1,4 Dioxane	0.46	U	0.0177	U	4.97	U	28.50	U
TO-15	Dibromomethane	0.17	U	0.00655	U	1.80	U	10.35	U
TO-15	Trichloroethene	0.37	U	0.0142	U	4.06	U	23.29	U
TO-15	Bromodichloromethane	0.17	U	0.00655	U	1.82	U	10.43	U
TO-15	Methyl Isobutyl Ketone	0.19	U	0.00732	U	2.09	U	12.00	U
TO-15	cis-1,3-Dichloropropene	0.33	U	0.0127	U	3.53	U	20.25	U
TO-15	Toluene	0.26	U	0.0100	U	62.68		44.89	J
TO-15	trans-1,3-Dichloropropene	0.32	U	0.0123	U	3.46	U	19.87	U
TO-15	1,1,2-Trichloroethane	0.38	U	0.0146	U	4.08	U	23.42	U
TO-15	2-Hexanone	0.18	U	0.00693	U	1.96	U	41.29	J
TO-15	1,3-Dichloropropane	0.19	U	0.00732	U	2.05	U	11.76	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	2.29	U	13.16	U
TO-15	1,2-Dibromoethane	0.54	U	0.0208	U	5.86	U	33.63	U
TO-15	Tetrachloroethene	0.47	U	0.0181	U	5.07	U	29.10	U
TO-15	Chlorobenzene	0.32	U	0.0123	U	3.44	U	19.76	U
TO-15	1,1,1,2-Tetrachloroethane	0.18	U	0.00693	U	1.92	U	11.00	U

Table 3-3N. Summary Data for Station3 Location North.

METHOD	COMPOUND	SF-3N		SF-3N		STA-3N-5		STA-3N-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.31	U	0.0119	U	4.71	J	19.01	U
TO-15	m & p-Xylene	0.61	U	0.0235	U	29.02	J	37.92	J
TO-15	Styrene	0.30	U	0.0116	U	3.22	U	18.47	U
TO-15	Bromoform	0.17	U	0.00655	U	1.87	U	10.74	U
TO-15	o-Xylene	0.30	U	0.0116	U	11.73	J	18.64	U
TO-15	1,1,2,2-Tetrachloroethane	0.47	U	0.0181	U	5.13	U	29.45	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	2.00	U	11.49	U
TO-15	n-Propylbenzene	0.23	U	0.00886	U	2.49	U	14.27	U
TO-15	Isopropylbenzene	0.23	U	0.00886	U	14.56		14.48	U
TO-15	1,3,5-Trimethylbenzene	0.35	U	0.0135	U	5.79	J	21.93	U
TO-15	tert-butyl benzene	0.23	U	0.00886	U	3.28	J	14.09	U
TO-15	1,2,4-Trimethylbenzene	0.34	U	0.0131	U	19.86		21.10	U
TO-15	sec-butylbenzene	0.24	U	0.00924	U	2.62	U	15.01	U
TO-15	1,3-Dichlorobenzene	0.41	U	0.0158	U	4.50	U	25.80	U
TO-15	Isopropyltoluene	0.24	U	0.00924	U	2.58	U	14.78	U
TO-15	Benzyl chloride	0.41	U	0.0158	U	4.46	U	25.62	U
TO-15	1,4-Dichlorobenzene	0.83	U	0.0320	U	8.99	U	51.61	U
TO-15	n-Butylbenzene	0.45	U	0.0173	U	4.83	U	27.71	U
TO-15	1,2-Dichlorobenzene	0.81	U	0.0312	U	8.82	U	50.59	U
TO-15	1,2-Dibromo-3-chloropropane	2.19	U	0.0843	U	23.73	U	136.22	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.03	U	0.0397	U	11.20	U	64.31	U
TO-15	Hexachlorobutadiene	1.49	U	0.0574	U	16.11	U	92.45	U

Table 3-3S. Summary Data for Station 3 Location South.

METHOD	COMPOUND	SF-3S		SF-3S		STA-3S-5		STA-3S-10	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
ASTM 1946	% Helium Trace Gas	NA		NA		1.205		0.075	
TO-15 SIM	<b>1,1,2,2-Tetrachloroethane</b>	0.045	U	0.00173	U	0.293	U	0.361	U
TO-15 SIM	<b>1,3-Dichlorobenzene</b>	0.039	U	0.00150	U	0.256	U	0.317	U
TO-15 SIM	<b>Benzyl chloride</b>	0.018	U	0.00069	U	0.121	U	0.149	U
TO-15 SIM	<b>1,4-Dichlorobenzene</b>	0.039	U	0.00150	U	0.357	J	0.317	U
TO-15 SIM	<b>1,2-Dichlorobenzene</b>	0.038	U	0.00146	U	0.281	J	0.310	U
TO-15 SIM	<b>Hexachlorobutadiene</b>	0.089	J	0.00343	J	0.459	U	0.567	U
TO-15 SIM	<b>Naphthalene</b>	0.503	B	0.01937	B	0.491	U	0.751	J
TO-15 SIM	<b>1,2,3-Trichloropropane</b>	0.035	U	0.00135	U	0.229	U	0.283	U
TO-15 SIM	<b>Vinyl chloride</b>	0.017	U	0.00065	U	0.111	U	0.137	U
TO-15 SIM	<b>Dichloromethane</b>	0.023	U	0.00089	U	<b>1.077</b>		<b>5.607</b>	
TO-15 SIM	<b>Chloroform</b>	<b>0.821</b>		<b>0.0316</b>		858.662	E	200.201	E
TO-15 SIM	<b>1,2-Dichloroethane</b>	0.027	U	0.00104	U	0.398	J	0.215	U
TO-15 SIM	<b>Benzene</b>	0.173	J	<b>0.00666</b>	J	<b>2.585</b>		<b>2.112</b>	
TO-15 SIM	<b>Carbon tetrachloride</b>	0.041	U	0.00158	U	<b>20.250</b>		<b>5.142</b>	
TO-15 SIM	<b>1,2-Dichloropropane</b>	0.030	U	0.00116	U	0.199	U	0.246	U
TO-15 SIM	<b>Trichloroethylene</b>	0.035	U	0.00135	U	0.421	J	0.286	U
TO-15 SIM	<b>Bromodichloromethane</b>	0.016	U	0.000616	U	0.104	U	0.128	U
TO-15 SIM	<b>1,2-Dibromoethane</b>	0.051	U	0.00196	U	0.334	U	0.413	U
TO-15 SIM	<b>1,1,2-Trichloroethane</b>	0.036	U	0.00139	U	0.233	U	0.287	U
TO-15 SIM	<b>Tetrachloroethene</b>	0.044	U	0.00169	U	<b>2.205</b>		1.552	J
TO-15 SIM	<b>Dibromochloromethane</b>	0.040	U	0.00154	U	0.262	U	<b>0.914</b>	
TO-15 SIM	<b>1,2-Dibromo-3-chloropropane</b>	<b>0.626</b>		<b>0.02410</b>		0.976	J	1.025	J
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		1.205		0.075	
TO-15	<b>Dichlorodifluoromethane</b>	0.33	U	0.0127	U	2.17	U	4.69	U
TO-15	<b>Chloromethane</b>	0.13	U	0.00501	U	2.61	J	1.90	U
TO-15	<b>Vinyl chloride</b>	0.17	U	0.00655	U	1.11	U	2.40	U
TO-15	<b>Bromomethane</b>	0.26	U	0.0100	U	1.69	U	3.65	U
TO-15	<b>Chloroethane</b>	0.18	U	0.00693	U	1.15	U	2.48	U
TO-15	<b>Ethanol</b>	0.42	U	0.0162	U	8.80	J	5.86	U
TO-15	<b>Trichlorofluoromethane</b>	0.37	U	0.0142	U	2.44	U	5.28	U
TO-15	<b>Acetonitrile</b>	0.22	U	0.00847	U	1.43	U	3.10	U
TO-15	<b>Acetone</b>	<b>12.74</b>		<b>0.490</b>		<b>63.77</b>		93.67	
TO-15	<b>Methyl iodide</b>	0.11	U	0.00424	U	0.73	U	1.58	U
TO-15	<b>1,1-Dichloroethene</b>	0.26	U	0.0100	U	1.67	U	3.62	U

Table 3-3S. Summary Data for Station 3 Location South.

METHOD	COMPOUND	SF-3S		SF-3S		STA-3S-5		STA-3S-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Freon 113	0.50	U	0.0193	U	3.27	U	7.06	U
TO-15	Dichloromethane	0.23	U	0.00886	U	1.51	U	3.26	U
TO-15	Carbon disulfide	0.21	J	0.00809	J	1.11	U	2.40	U
TO-15	trans-1,2-Dichloroethene	0.17	U	0.00655	U	1.10	U	2.38	U
TO-15	Methyl tert butyl ether	0.16	U	0.00616	U	1.02	U	2.21	U
TO-15	1,1-Dichloroethane	0.26	U	0.0100	U	1.71	U	3.69	U
TO-15	Vinyl acetate	0.18	U	0.00693	U	1.19	U	2.57	U
TO-15	2-Butanone	11.36		0.437		17.56		26.77	
TO-15	Bromochloromethane	0.17	U	0.00655	U	1.08	U	2.34	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	0.96	U	2.08	U
TO-15	cis-1,2-Dichloroethene	0.26	U	0.0100	U	1.71	U	3.69	U
TO-15	2,2-Dichloropropane	0.24	U	0.0092	U	1.58	U	3.42	U
TO-15	Chloroform	0.78	J	0.0300	J	895.67		2,704.20	
TO-15	1,1,1-Trichloroethane	0.36	U	0.0139	U	2.33	U	5.03	U
TO-15	1,2-Dichloroethane	0.27	U	0.0104	U	1.74	U	3.77	U
TO-15	1,1-Dichloropropene	0.18	U	0.00693	U	1.15	U	2.49	U
TO-15	Benzene	0.45	J	0.0173	J	4.80	J	13.54	J
TO-15	Carbon tetrachloride	0.41	U	0.0158	U	20.38		54.41	
TO-15	n-Heptane	0.15	U	0.00578	U	2.66	J	6.52	J
TO-15	1,2-Dichloropropane	0.30	U	0.0116	U	1.99	U	4.30	U
TO-15	1,4 Dioxane	0.43	U	0.0166	U	2.83	U	6.12	U
TO-15	Dibromomethane	0.16	U	0.00616	U	1.03	U	2.22	U
TO-15	Trichloroethene	0.35	U	0.0135	U	2.31	U	5.00	U
TO-15	Bromodichloromethane	0.16	U	0.00616	U	1.04	U	2.24	U
TO-15	Methyl Isobutyl Ketone	0.18	U	0.00693	U	1.19	U	2.58	U
TO-15	cis-1,3-Dichloropropene	0.31	U	0.0119	U	2.01	U	4.35	U
TO-15	Toluene	0.25	U	0.0096	U	4.50	J	24.59	
TO-15	trans-1,3-Dichloropropene	0.30	U	0.0116	U	1.97	U	4.27	U
TO-15	1,1,2-Trichloroethane	0.36	U	0.0139	U	2.33	U	5.03	U
TO-15	2-Hexanone	0.17	U	0.00655	U	2.46	J	2.42	U
TO-15	1,3-Dichloropropane	0.18	U	0.00693	U	1.17	U	2.53	U
TO-15	Dibromochloromethane	0.20	U	0.00770	U	1.31	U	2.82	U
TO-15	1,2-Dibromoethane	0.51	U	0.0196	U	3.34	U	7.22	U
TO-15	Tetrachloroethene	0.44	U	0.0169	U	3.29	J	7.79	J
TO-15	Chlorobenzene	0.30	U	0.0116	U	1.96	U	4.24	U
TO-15	1,1,1,2-Tetrachloroethane	0.17	U	0.00655	U	1.09	U	2.36	U

Table 3-3S. Summary Data for Station 3 Location South.

METHOD	COMPOUND	SF-3S		SF-3S		STA-3S-5		STA-3S-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.29	U	0.0112	U	4.61	J	4.08	U
TO-15	m & p-Xylene	0.57	U	0.0219	U	5.50	J	12.89	J
TO-15	Styrene	0.28	U	0.0108	U	1.84	U	3.97	U
TO-15	Bromoform	0.16	U	0.00616	U	1.07	U	2.31	U
TO-15	o-Xylene	0.28	U	0.0108	U	1.85	U	5.97	J
TO-15	1,1,2,2-Tetrachloroethane	0.45	U	0.0173	U	2.93	U	6.32	U
TO-15	1,2,3-Trichloropropane	0.17	U	0.00655	U	1.14	U	2.47	U
TO-15	n-Propylbenzene	0.22	U	0.00847	U	13.13		3.06	U
TO-15	Isopropylbenzene	0.22	U	0.00847	U	6.44	J	6.31	J
TO-15	1,3,5-Trimethylbenzene	0.33	U	0.0127	U	2.18	U	4.71	U
TO-15	tert-butyl benzene	0.21	U	0.00809	U	1.41	J	3.02	U
TO-15	1,2,4-Trimethylbenzene	0.32	U	0.0123	U	7.57	J	9.20	J
TO-15	sec-butylbenzene	0.23	U	0.00886	U	1.49	U	3.22	U
TO-15	1,3-Dichlorobenzene	0.39	U	0.0150	U	2.56	U	5.54	U
TO-15	Isopropyltoluene	0.22	U	0.00847	U	1.47	U	3.17	U
TO-15	Benzyl chloride	0.39	U	0.0150	U	2.55	U	5.50	U
TO-15	1,4-Dichlorobenzene	0.79	U	0.0304	U	5.13	U	11.08	U
TO-15	n-Butylbenzene	0.42	U	0.0162	U	5.39	J	5.95	U
TO-15	1,2-Dichlorobenzene	0.77	U	0.0296	U	5.03	U	10.86	U
TO-15	1,2-Dibromo-3-chloropropane	2.07	U	0.0797	U	13.54	U	29.25	U
TO-15 SIM	1,2,4-Trichlorobenzene	0.98	U	0.0377	U	6.39	U	13.81	U
TO-15	Hexachlorobutadiene	1.41	U	0.0543	U	9.19	U	19.85	U

Table 3-3E. Summary Data for Station 3 Location East.

METHOD	COMPOUND	SF-3E		SF-3E		STA-3E-5		STA-3E-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		3.152		8.682	U
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.046	U	0.00177	U	0.296	U	0.304	U
TO-15 SIM	1,3-Dichlorobenzene	0.069	J	0.00266	J	0.260	U	0.266	U
TO-15 SIM	Benzyl chloride	0.019	U	0.00073	U	0.122	U	0.125	U
TO-15 SIM	1,4-Dichlorobenzene	0.042	J	0.00162	J	0.260	U	0.266	U
TO-15 SIM	1,2-Dichlorobenzene	0.040	U	0.00154	U	0.255	U	0.261	U
TO-15 SIM	Hexachlorobutadiene	0.073	U	0.00281	U	0.465	U	0.476	U
TO-15 SIM	Naphthalene	0.245	J	0.00943	J	0.798	J	0.799	J
TO-15 SIM	1,2,3-Trichloropropane	0.036	U	0.00139	U	0.232	U	0.300	J
TO-15 SIM	Vinyl chloride	0.018	U	0.00069	U	0.113	U	0.115	U
TO-15 SIM	Dichloromethane	0.024	U	0.00092	U	1.977		1.936	
TO-15 SIM	Chloroform	1.091		0.0420		412.619	E	896.465	E
TO-15 SIM	1,2-Dichloroethane	0.028	U	0.00108	U	0.177	U	7.894	
TO-15 SIM	Benzene	0.172		0.00662		2.465		4.758	
TO-15 SIM	Carbon tetrachloride	0.050	J	0.00193	J	8.061		32.224	
TO-15 SIM	1,2-Dichloropropane	0.031	U	0.00119	U	0.202	U	0.206	U
TO-15 SIM	Trichloroethene	0.037	U	0.00142	U	0.234	U	0.492	J
TO-15 SIM	Bromodichloromethane	0.016	U	0.000616	U	0.105	U	12.966	
TO-15 SIM	1,2-Dibromoethane	0.053	U	0.00204	U	0.338	U	0.347	U
TO-15 SIM	1,1,2-Trichloroethane	0.037	U	0.00142	U	0.236	U	0.241	U
TO-15 SIM	Tetrachloroethene	0.046	U	0.00177	U	0.907	J	2.758	
TO-15 SIM	Dibromochloromethane	0.041	U	0.00158	U	0.587	J	6.825	
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.127	J	0.00489	J	1.147	J	1.169	J
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		3.152		8.682	U
TO-15	Dichlorodifluoromethane	0.34	U	0.0131	U	4.40	U	4.50	U
TO-15	Chloromethane	0.14	U	0.00539	U	3.72	J	83.60	
TO-15	Vinyl chloride	0.18	U	0.00693	U	2.25	U	2.31	U
TO-15	Bromomethane	0.27	U	0.0104	U	3.42	U	3.50	U
TO-15	Chloroethane	0.18	U	0.00693	U	2.32	U	7.10	J
TO-15	Ethanol	1.18	J	0.0454	J	36.13		173.73	
TO-15	Trichlorofluoromethane	0.39	U	0.0150	U	4.95	U	5.07	U
TO-15	Acetonitrile	0.23	U	0.00886	U	2.90	U	2.97	U
TO-15	Acetone	4.48		0.172		147.63		156.22	
TO-15	Methyl iodide	0.12	U	0.00462	U	1.48	U	1.52	U
TO-15	1,1-Dichloroethene	0.26	U	0.0100	U	3.39	U	3.47	U

Table 3-3E. Summary Data for Station 3 Location East.

METHOD	COMPOUND	SF-3E		SF-3E		STA-3E-5		STA-3E-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
TO-15	Freon 113	0.52	U	0.0200	U	6.62	U	6.78	U
TO-15	Dichloromethane	0.24	U	0.00924	U	3.06	U	5.12	J
TO-15	Carbon disulfide	<b>2.03</b>		<b>0.07816</b>		2.25	U	5.88	J
TO-15	trans-1,2-Dichloroethene	0.17	U	0.00655	U	2.23	U	2.28	U
TO-15	Methyl tert butyl ether	0.16	U	0.00616	U	2.07	U	2.12	U
TO-15	1,1-Dichloroethane	0.27	U	0.0104	U	3.46	U	3.55	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	2.41	U	2.47	U
TO-15	2-Butanone	<b>1.79</b>		<b>0.069</b>		<b>39.04</b>		<b>36.83</b>	
TO-15	Bromochloromethane	0.17	U	0.00655	U	2.20	U	2.25	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	1.95	U	2.00	U
TO-15	cis-1,2-Dichloroethene	0.27	U	0.0104	U	3.46	U	3.54	U
TO-15	2,2-Dichloropropane	0.25	U	0.0096	U	3.20	U	3.28	U
TO-15	Chloroform	0.52	J	0.0200	J	<b>462.33</b>		<b>1,229.27</b>	
TO-15	1,1,1-Trichloroethane	0.37	U	0.0142	U	4.71	U	4.83	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	3.53	U	6.74	J
TO-15	1,1-Dichloropropene	0.18	U	0.00693	U	2.33	U	2.39	U
TO-15	Benzene	0.27	J	0.0104	J	2.84	J	4.44	J
TO-15	Carbon tetrachloride	0.42	U	0.0162	U	7.38	J	<b>28.95</b>	
TO-15	n-Heptane	0.15	U	0.00578	U	<b>11.51</b>		<b>14.71</b>	
TO-15	1,2-Dichloropropane	0.31	U	0.0119	U	4.03	U	4.13	U
TO-15	1,4 Dioxane	0.45	U	0.0173	U	5.74	U	5.88	U
TO-15	Dibromomethane	0.16	U	0.00616	U	2.08	U	2.13	U
TO-15	Trichloroethene	0.37	U	0.0142	U	4.69	U	4.80	U
TO-15	Bromodichloromethane	0.16	U	0.00616	U	2.10	U	9.61	J
TO-15	Methyl Isobutyl Ketone	0.19	U	0.00732	U	2.41	U	2.47	U
TO-15	cis-1,3-Dichloropropene	0.32	U	0.0123	U	4.07	U	4.17	U
TO-15	Toluene	0.26	U	0.0100	U	16.30	J	6.41	J
TO-15	trans-1,3-Dichloropropene	0.31	U	0.0119	U	4.00	U	4.10	U
TO-15	1,1,2-Trichloroethane	0.37	U	0.0142	U	4.71	U	4.83	U
TO-15	2-Hexanone	0.18	U	0.00693	U	2.27	U	2.32	U
TO-15	1,3-Dichloropropane	0.18	U	0.00693	U	2.37	U	2.43	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	2.65	U	6.41	J
TO-15	1,2-Dibromoethane	0.53	U	0.0204	U	6.77	U	6.93	U
TO-15	Tetrachloroethene	0.46	U	0.0177	U	5.86	U	6.00	U
TO-15	Chlorobenzene	0.31	U	0.0119	U	3.98	U	4.07	U
TO-15	1,1,1,2-Tetrachloroethane	0.17	U	0.00655	U	2.21	U	2.27	U

Table 3-3E. Summary Data for Station 3 Location East.

METHOD	COMPOUND	SF-3E		SF-3E		STA-3E-5		STA-3E-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.30	U	0.0116	U	3.82	U	3.92	U
TO-15	m & p-Xylene	0.59	U	0.0227	U	7.58	U	7.76	U
TO-15	Styrene	0.29	U	0.0112	U	3.72	U	3.81	U
TO-15	Bromoform	0.17	U	0.00655	U	2.16	U	6.02	J
TO-15	o-Xylene	0.29	U	0.0112	U	3.75	U	3.84	U
TO-15	1,1,2,2-Tetrachloroethane	0.46	U	0.0177	U	5.93	U	6.07	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	2.31	U	2.37	U
TO-15	n-Propylbenzene	0.22	U	0.00847	U	2.87	U	2.94	U
TO-15	Isopropylbenzene	0.23	U	0.00886	U	2.91	U	2.98	U
TO-15	1,3,5-Trimethylbenzene	0.34	U	0.0131	U	4.41	U	4.52	U
TO-15	tert-butyl benzene	0.22	U	0.00847	U	2.83	U	2.90	U
TO-15	1,2,4-Trimethylbenzene	0.33	U	0.0127	U	4.25	U	4.35	U
TO-15	sec-butylbenzene	0.24	U	0.00924	U	3.02	U	3.09	U
TO-15	1,3-Dichlorobenzene	0.41	U	0.0158	U	5.19	U	5.32	U
TO-15	Isopropyltoluene	0.23	U	0.00886	U	2.97	U	3.05	U
TO-15	Benzyl chloride	0.40	U	0.0154	U	5.16	U	5.28	U
TO-15	1,4-Dichlorobenzene	0.81	U	0.0312	U	10.38	U	10.64	U
TO-15	n-Butylbenzene	0.44	U	0.0169	U	5.58	U	5.71	U
TO-15	1,2-Dichlorobenzene	0.79	U	0.0304	U	10.18	U	10.43	U
TO-15	1,2-Dibromo-3-chloropropane	2.14	U	0.0824	U	27.41	U	28.08	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.01	U	0.0389	U	12.94	U	13.26	U
TO-15	Hexachlorobutadiene	1.45	U	0.0558	U	18.60	U	19.06	U

Table 3-3W. Summary Data for Station 3 Location West.

METHOD	COMPOUND	SF-3W		SF-3W		STA-3W-5		STA-3W-10	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
ASTM 1946	% Helium Trace Gas	NA		NA		6.893		10.18	
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.046	U	0.00177	U	0.370	U	0.316	U
TO-15 SIM	1,3-Dichlorobenzene	0.040	U	0.00154	U	0.325	U	0.277	U
TO-15 SIM	Benzyl chloride	0.019	U	0.00073	U	0.153	U	0.131	U
TO-15 SIM	1,4-Dichlorobenzene	0.040	U	0.00154	U	0.332	J	0.350	J
TO-15 SIM	1,2-Dichlorobenzene	0.039	U	0.00150	U	0.318	U	0.272	U
TO-15 SIM	Hexachlorobutadiene	0.071	U	0.00273	U	0.581	U	0.496	U
TO-15 SIM	Naphthalene	0.364	B	0.01401	B	0.988	J	0.531	U
TO-15 SIM	1,2,3-Trichloropropane	0.036	U	0.00139	U	0.290	U	0.247	U
TO-15 SIM	Vinyl chloride	0.017	U	0.00065	U	0.141	U	0.120	U
TO-15 SIM	Dichloromethane	0.023	U	0.00089	U	2.595		6.367	
TO-15 SIM	Chloroform	0.032	U	0.0012	U	76.168		2,572.204	E
TO-15 SIM	1,2-Dichloroethane	0.027	U	0.00104	U	0.221	U	0.215	J
TO-15 SIM	Benzene	0.192	J	0.00739	J	3.257		15.071	
TO-15 SIM	Carbon tetrachloride	0.042	U	0.00162	U	2.050		66.837	
TO-15 SIM	1,2-Dichloropropane	0.031	U	0.00119	U	0.252	U	0.215	U
TO-15 SIM	Trichloroethylene	0.220		0.00847		0.293	U	0.491	J
TO-15 SIM	Bromodichloromethane	0.016	U	0.000616	U	0.131	U	0.753	
TO-15 SIM	1,2-Dibromoethane	0.052	U	0.00200	U	0.423	U	0.361	U
TO-15 SIM	1,1,2-Trichloroethane	0.036	U	0.00139	U	0.294	U	0.251	U
TO-15 SIM	Tetrachloroethylene	0.045	U	0.00173	U	1.101	J	7.107	
TO-15 SIM	Dibromochloromethane	0.041	U	0.00158	U	0.332	U	0.283	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.100	J	0.00385	J	1.051	J	0.771	J
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		6.893		10.18	U
TO-15	Dichlorodifluoromethane	0.34	U	0.0131	U	3.73	J	2.75	J
TO-15	Chloromethane	0.14	U	0.00539	U	2.53	J	2.40	J
TO-15	Vinyl chloride	0.17	U	0.00655	U	1.41	U	1.37	U
TO-15	Bromomethane	0.26	U	0.0100	U	2.14	U	2.08	U
TO-15	Chloroethane	0.18	U	0.00693	U	1.45	U	1.42	U
TO-15	Ethanol	1.73	J	0.0666	J	25.29		33.35	
TO-15	Trichlorofluoromethane	0.38	U	0.0146	U	3.09	U	3.02	U
TO-15	Acetonitrile	0.22	U	0.00847	U	1.81	U	1.77	U
TO-15	Acetone	10.34		0.398		286.22		631.98	
TO-15	Methyl iodide	0.11	U	0.00424	U	0.93	U	0.91	U
TO-15	1,1-Dichloroethene	0.26	U	0.0100	U	2.12	U	2.07	U

Table 3-3W. Summary Data for Station 3 Location West.

METHOD	COMPOUND	SF-3W		SF-3W		STA-3W-5		STA-3W-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Freon 113	0.51	U	0.0196	U	4.13	U	4.03	U
TO-15	Dichloromethane	0.23	U	0.00886	U	4.30	J	8.98	J
TO-15	Carbon disulfide	0.17	U	0.00655	U	1.41	U	2.43	J
TO-15	trans-1,2-Dichloroethene	0.17	U	0.00655	U	1.39	U	1.36	U
TO-15	Methyl tert butyl ether	0.16	U	0.00616	U	1.29	U	1.26	U
TO-15	1,1-Dichloroethane	0.27	U	0.0104	U	2.16	U	2.11	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	1.51	U	1.47	U
TO-15	2-Butanone	4.08		0.157		106.49		172.17	
TO-15	Bromochloromethane	0.17	U	0.00655	U	1.37	U	1.34	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	1.22	U	1.19	U
TO-15	cis-1,2-Dichloroethene	0.27	U	0.0104	U	2.16	U	2.11	U
TO-15	2,2-Dichloropropane	0.25	U	0.0096	U	2.00	U	1.95	U
TO-15	Chloroform	0.32	U	0.0123	U	95.76		287.61	
TO-15	1,1,1-Trichloroethane	0.36	U	0.0139	U	2.94	U	2.87	U
TO-15	1,2-Dichloroethane	0.27	U	0.0104	U	2.21	U	2.15	U
TO-15	1,1-Dichloropropene	0.18	U	0.00693	U	1.46	U	1.42	U
TO-15	Benzene	0.42	J	0.0162	J	4.44	J	4.62	J
TO-15	Carbon tetrachloride	0.42	U	0.0162	U	3.40	U	5.21	J
TO-15	n-Heptane	0.15	U	0.00578	U	4.69	J	5.95	
TO-15	1,2-Dichloropropane	0.31	U	0.0119	U	2.52	U	2.46	U
TO-15	1,4 Dioxane	0.44	U	0.0169	U	3.58	U	3.50	U
TO-15	Dibromomethane	0.16	U	0.00616	U	1.30	U	1.27	U
TO-15	Trichloroethene	0.36	U	0.0139	U	2.93	U	2.86	U
TO-15	Bromodichloromethane	0.16	U	0.00616	U	1.31	U	1.28	U
TO-15	Methyl Isobutyl Ketone	0.19	U	0.00732	U	1.51	U	1.47	U
TO-15	cis-1,3-Dichloropropene	0.31	U	0.0119	U	2.55	U	2.48	U
TO-15	Toluene	0.25	U	0.0096	U	48.89		6.22	J
TO-15	trans-1,3-Dichloropropene	0.31	U	0.0119	U	2.50	U	2.44	U
TO-15	1,1,2-Trichloroethane	0.36	U	0.0139	U	2.94	U	2.87	U
TO-15	2-Hexanone	0.17	U	0.00655	U	7.22		22.10	
TO-15	1,3-Dichloropropane	0.18	U	0.00693	U	1.48	U	1.44	U
TO-15	Dibromochloromethane	0.20	U	0.00770	U	1.65	U	1.61	U
TO-15	1,2-Dibromoethane	0.52	U	0.0200	U	4.23	U	4.13	U
TO-15	Tetrachloroethene	0.45	U	0.0173	U	3.66	U	3.57	U
TO-15	Chlorobenzene	0.31	U	0.0119	U	2.49	U	2.43	U
TO-15	1,1,1,2-Tetrachloroethane	0.17	U	0.00655	U	1.38	U	1.35	U

Table 3-3W. Summary Data for Station 3 Location West.

METHOD	COMPOUND	SF-3W		SF-3W		STA-3W-5		STA-3W-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.29	U	0.0112	U	4.95	J	2.33	U
TO-15	m & p-Xylene	0.58	U	0.0223	U	30.34		4.62	U
TO-15	Styrene	0.29	U	0.0112	U	2.32	U	2.27	U
TO-15	Bromoform	0.17	U	0.00655	U	1.35	U	1.32	U
TO-15	o-Xylene	0.29	U	0.0112	U	9.83	J	2.29	U
TO-15	1,1,2,2-Tetrachloroethane	0.46	U	0.0177	U	3.70	U	3.61	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	1.45	U	1.41	U
TO-15	n-Propylbenzene	0.22	U	0.00847	U	1.80	U	1.75	U
TO-15	Isopropylbenzene	0.22	U	0.00847	U	8.86	J	1.78	U
TO-15	1,3,5-Trimethylbenzene	0.34	U	0.0131	U	2.76	U	2.69	U
TO-15	tert-butyl benzene	0.22	U	0.00847	U	1.77	U	1.73	U
TO-15	1,2,4-Trimethylbenzene	0.33	U	0.0127	U	9.34	J	2.59	U
TO-15	sec-butylbenzene	0.23	U	0.00886	U	1.89	U	1.84	U
TO-15	1,3-Dichlorobenzene	0.40	U	0.0154	U	3.25	U	3.17	U
TO-15	Isopropyltoluene	0.23	U	0.00886	U	1.86	U	1.81	U
TO-15	Benzyl chloride	0.40	U	0.0154	U	3.22	U	3.14	U
TO-15	1,4-Dichlorobenzene	0.80	U	0.0308	U	6.49	U	6.33	U
TO-15	n-Butylbenzene	0.43	U	0.0166	U	3.49	U	3.40	U
TO-15	1,2-Dichlorobenzene	0.78	U	0.0300	U	6.36	U	6.21	U
TO-15	1,2-Dibromo-3-chloropropane	2.11	U	0.0812	U	17.13	U	16.71	U
TO-15 SIM	1,2,4-Trichlorobenzene	0.99	U	0.0381	U	8.09	U	7.89	U
TO-15	Hexachlorobutadiene	1.43	U	0.0551	U	11.63	U	11.34	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	SF-3C		SF-3C		STA-3C-5		STA-3C-10		SF-3CR	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
ASTM 1946	% Helium Trace Gas	NA		NA		26.738		41.757		NA	
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.046	U	0.00177	U	0.356	U	0.291	U	0.045	U
TO-15 SIM	1,3-Dichlorobenzene	0.040	U	0.00154	U	0.312	U	0.255	U	0.039	U
TO-15 SIM	Benzyl chloride	0.019	U	0.000732	U	0.147	U	0.120	U	0.018	U
TO-15 SIM	1,4-Dichlorobenzene	0.040	U	0.00154	U	0.312	U	0.255	U	0.039	U
TO-15 SIM	1,2-Dichlorobenzene	0.040	J	0.00154	J	0.306	U	0.250	U	0.038	U
TO-15 SIM	Hexachlorobutadiene	0.093	J	0.00358	J	0.559	U	0.457	U	0.092	J
TO-15 SIM	Naphthalene	0.509	B	0.01960	B	2.145	J	1.678	J	0.514	B
TO-15 SIM	1,2,3-Trichloropropane	0.036	U	0.00139	U	0.278	U	0.227	U	0.035	U
TO-15 SIM	Vinyl chloride	0.017	U	0.000655	U	0.135	U	0.110	U	0.017	U
TO-15 SIM	Dichloromethane	0.024	U	0.00092	U	2.765		2.427		0.024	U
TO-15 SIM	Chloroform	1.451		0.05586		749.773	E	894.574	E	1.119	
TO-15 SIM	1,2-Dichloroethane	0.027	U	0.00104	U	0.401	J	0.173	U	0.027	U
TO-15 SIM	Benzene	0.178	J	0.00685	J	13.873		4.496		0.153	J
TO-15 SIM	Carbon tetrachloride	0.068	J	0.00262	J	17.649		20.630		0.050	J
TO-15 SIM	1,2-Dichloropropane	0.031	U	0.00119	U	0.242	U	0.198	U	0.031	U
TO-15 SIM	Trichloroethylene	0.036	U	0.00139	U	0.281	U	0.230	U	0.036	U
TO-15 SIM	Bromodichloromethane	0.016	U	0.000616	U	0.126	U	0.103	U	0.016	U
TO-15 SIM	1,2-Dibromoethane	0.052	U	0.00200	U	0.406	U	0.332	U	0.052	U
TO-15 SIM	1,1,2-Trichloroethane	0.036	U	0.00139	U	0.283	U	0.231	U	0.036	U
TO-15 SIM	Tetrachloroethylene	0.045	U	0.00173	U	2.442		3.899		0.045	U
TO-15 SIM	Dibromochloromethane	0.041	U	0.00158	U	0.319	U	0.261	U	0.041	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.666		0.02564		1.331	J	0.814	J	0.739	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		26.738		41.757		NA	
TO-15	Dichlorodifluoromethane	0.34	U	0.0131	U	2.95	J	2.16	U	0.34	U
TO-15	Chloromethane	0.14	U	0.0054	U	3.71	J	2.64	J	0.14	U
TO-15	Vinyl chloride	0.17	U	0.00655	U	1.35	U	1.10	U	0.17	U
TO-15	Bromomethane	0.26	U	0.0100	U	2.05	U	1.68	U	0.26	U
TO-15	Chloroethane	0.18	U	0.00693	U	2.23	J	1.14	U	0.18	U
TO-15	Ethanol	1.38	J	0.053	J	3.30	U	2.70	U	0.43	U
TO-15	Trichlorofluoromethane	0.38	U	0.0146	U	2.97	U	2.43	U	0.38	U
TO-15	Acetonitrile	0.22	U	0.00847	U	1.74	U	1.43	U	0.22	U
TO-15	Acetone	6.19		0.238		145.84		116.80		14.24	
TO-15	Methyl iodide	0.11	U	0.00424	U	0.89	U	0.73	U	0.11	U
TO-15	1,1-Dichloroethene	0.26	U	0.0100	U	2.04	U	1.66	U	0.26	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	SF-3C		SF-3C		STA-3C-5		STA-3C-10		SF-3CR	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3		ug/m3	
TO-15	Freon 113	0.51	U	0.0196	U	3.97	U	3.25	U	0.51	U
TO-15	Dichloromethane	0.24	U	0.00924	U	2.40	J	1.58	J	0.24	U
TO-15	Carbon disulfide	0.29	J	0.011	J	1.38	J	6.62		0.17	U
TO-15	trans-1,2-Dichloroethene	0.17	U	0.00655	U	1.34	U	1.09	U	0.17	U
TO-15	Methyl tert butyl ether	0.16	U	0.0062	U	1.24	U	1.02	U	0.16	U
TO-15	1,1-Dichloroethane	0.27	U	0.0104	U	2.08	U	1.70	U	0.27	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	1.45	U	1.18	U	0.19	U
TO-15	2-Butanone	1.65		0.064		37.93		41.98		7.56	
TO-15	Bromochloromethane	0.17	U	0.00655	U	1.32	U	1.08	U	0.17	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	1.17	U	0.96	U	0.15	U
TO-15	cis-1,2-Dichloroethene	0.27	U	0.0104	U	2.08	U	1.70	U	0.27	U
TO-15	2,2-Dichloropropane	0.25	U	0.0096	U	1.92	U	1.57	U	0.25	U
TO-15	Chloroform	1.07	J	0.0412	J	880.77		937.74		0.96	J
TO-15	1,1,1-Trichloroethane	0.36	U	0.0139	U	2.83	U	2.31	U	0.36	U
TO-15	1,2-Dichloroethane	0.27	U	0.0104	U	2.12	U	1.73	U	0.27	U
TO-15	1,1-Dichloropropene	0.18	U	0.00693	U	1.40	U	1.14	U	0.18	U
TO-15	Benzene	0.29	J	0.0112	J	13.35		4.90	J	0.33	J
TO-15	Carbon tetrachloride	0.42	U	0.0162	U	15.75	J	21.28		0.42	U
TO-15	n-Heptane	0.15	U	0.00578	U	8.78		9.15		0.15	U
TO-15	1,2-Dichloropropane	0.31	U	0.0119	U	2.42	U	1.98	U	0.31	U
TO-15	1,4 Dioxane	0.44	U	0.0169	U	3.44	U	2.82	U	0.44	U
TO-15	Dibromomethane	0.16	U	0.00616	U	1.25	U	1.02	U	0.16	U
TO-15	Trichloroethene	0.36	U	0.0139	U	2.81	U	2.30	U	0.36	U
TO-15	Bromodichloromethane	0.16	U	0.00616	U	1.26	U	1.03	U	0.16	U
TO-15	Methyl Isobutyl Ketone	0.26	J	0.01001	J	1.45	U	1.19	U	0.19	U
TO-15	cis-1,3-Dichloropropene	0.32	U	0.0123	U	2.45	U	2.00	U	0.32	U
TO-15	Toluene	0.25	U	0.0096	U	29.54		14.32		0.25	U
TO-15	trans-1,3-Dichloropropene	0.31	U	0.0119	U	2.40	U	1.96	U	0.31	U
TO-15	1,1,2-Trichloroethane	0.36	U	0.0139	U	2.83	U	2.31	U	0.36	U
TO-15	2-Hexanone	0.39	J	0.01502	J	1.36	U	1.11	U	0.18	J
TO-15	1,3-Dichloropropane	0.18	U	0.00693	U	1.42	U	1.16	U	0.18	U
TO-15	Dibromochloromethane	0.20	U	0.00770	U	1.59	U	1.30	U	0.20	U
TO-15	1,2-Dibromoethane	0.52	U	0.0200	U	4.06	U	3.32	U	0.52	U
TO-15	Tetrachloroethene	0.45	U	0.0173	U	3.52	U	4.52	J	0.45	U
TO-15	Chlorobenzene	0.31	U	0.0119	U	2.39	U	1.95	U	0.31	U
TO-15	1,1,1,2-Tetrachloroethane	0.17	U	0.00655	U	1.33	U	1.09	U	0.17	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	SF-3C		SF-3C		STA-3C-5		STA-3C-10		SF-3CR	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.30	U	0.0116	U	4.34	J	1.88	U	0.30	U
TO-15	m & p-Xylene	0.59	U	0.0227	U	23.55		5.62	J	0.59	U
TO-15	Styrene	0.29	U	0.0112	U	2.23	U	1.82	U	0.29	U
TO-15	Bromoform	0.17	U	0.00655	U	1.30	U	1.06	U	0.17	U
TO-15	o-Xylene	0.29	U	0.0112	U	10.51	J	2.46	J	0.29	U
TO-15	1,1,2,2-Tetrachloroethane	0.46	U	0.0177	U	3.56	U	2.91	U	0.46	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	1.39	U	1.13	U	0.18	U
TO-15	n-Propylbenzene	0.22	U	0.00847	U	2.37	J	1.41	U	0.22	U
TO-15	Isopropylbenzene	0.23	U	0.00886	U	10.50		1.43	U	0.23	U
TO-15	1,3,5-Trimethylbenzene	0.34	U	0.0131	U	5.06	J	2.17	U	0.34	U
TO-15	tert-butyl benzene	0.22	U	0.00847	U	1.70	U	1.39	U	0.22	U
TO-15	1,2,4-Trimethylbenzene	0.33	U	0.0127	U	23.05		2.08	U	0.33	U
TO-15	sec-butylbenzene	0.23	U	0.00886	U	1.81	U	1.48	U	0.23	U
TO-15	1,3-Dichlorobenzene	0.40	U	0.0154	U	3.12	U	2.55	U	0.40	U
TO-15	Isopropyltoluene	0.23	U	0.00886	U	1.79	U	1.46	U	0.23	U
TO-15	Benzyl chloride	0.40	U	0.0154	U	3.10	U	2.53	U	0.40	U
TO-15	1,4-Dichlorobenzene	0.80	U	0.0308	U	6.24	U	5.10	U	0.80	U
TO-15	n-Butylbenzene	0.43	U	0.0166	U	3.35	U	2.74	U	0.43	U
TO-15	1,2-Dichlorobenzene	0.79	U	0.0304	U	6.11	U	5.00	U	0.79	U
TO-15	1,2-Dibromo-3-chloropropane	2.12	U	0.0816	U	16.46	U	13.46	U	2.12	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.00	U	0.0385	U	7.77	U	6.35	U	1.00	U
TO-15	Hexachlorobutadiene	1.44	U	0.0554	U	11.17	U	9.13	U	1.44	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	SF-3CR	STA-3CR-5	STA-3CR-10	SF-3CRD		SF-3CRD	
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>		ug/m <sup>2</sup> ,min-1	
ASTM 1946	% Helium Trace Gas	NA	5.979	31.435	NA		NA	
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.00173	U	0.231	U	0.255	U	0.046
TO-15 SIM	1,3-Dichlorobenzene	0.00150	U	0.203	U	0.223	U	0.041
TO-15 SIM	Benzyl chloride	0.000693	U	0.095	U	0.105	U	0.019
TO-15 SIM	1,4-Dichlorobenzene	0.00150	U	0.203	U	0.223	U	0.041
TO-15 SIM	1,2-Dichlorobenzene	0.00146	U	0.199	U	0.219	U	0.041
TO-15 SIM	Hexachlorobutadiene	0.00354	J	0.399	J	0.400	U	0.104
TO-15 SIM	Naphthalene	0.01979	B	1.214	J	0.993	J	0.652
TO-15 SIM	1,2,3-Trichloropropane	0.00135	U	0.181	U	0.199	U	0.059
TO-15 SIM	Vinyl chloride	0.000655	U	0.088	U	0.097	U	0.018
TO-15 SIM	Dichloromethane	0.00092	U	2.048		0.131	U	0.028
TO-15 SIM	Chloroform	0.04308		6.822		2.909		1.137
TO-15 SIM	1,2-Dichloroethane	0.00104	U	0.891		0.152	U	0.028
TO-15 SIM	Benzene	0.00589	J	2.374		0.738	U	0.209
TO-15 SIM	Carbon tetrachloride	0.00193	J	0.618	J	0.580	J	0.042
TO-15 SIM	1,2-Dichloropropane	0.00119	U	0.157	U	0.173	U	0.031
TO-15 SIM	Trichloroethylene	0.00139	U	0.237	J	0.201	U	0.037
TO-15 SIM	Bromodichloromethane	0.000616	U	0.082	U	0.090	U	0.016
TO-15 SIM	1,2-Dibromoethane	0.00200	U	0.264	U	0.291	U	0.053
TO-15 SIM	1,1,2-Trichloroethane	0.00139	U	0.184	U	0.203	U	0.037
TO-15 SIM	Tetrachloroethene	0.00173	U	0.366	J	0.753	J	0.046
TO-15 SIM	Dibromochloromethane	0.00158	U	0.207	U	0.228	U	0.041
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.02845		1.095		1.182	J	0.802
		ug/m <sup>2</sup> ,min-1		ug/m <sup>3</sup>		ug/m <sup>3</sup>		ug/m <sup>2</sup> ,min-1
ASTM 1946	% Helium Trace Gas	NA	5.979	31.435	NA		NA	
TO-15	Dichlorodifluoromethane	0.0131	U	3.34	J	2.62	J	0.34
TO-15	Chloromethane	0.0054	U	5.02		1.64	J	0.14
TO-15	Vinyl chloride	0.00655	U	0.88	U	0.97	U	0.18
TO-15	Bromomethane	0.0100	U	1.33	U	1.47	U	0.27
TO-15	Chloroethane	0.00693	U	1.81	J	1.00	U	0.18
TO-15	Ethanol	0.017	U	15.98		2.36	U	2.14
TO-15	Trichlorofluoromethane	0.0146	U	1.93	U	2.13	U	0.39
TO-15	Acetonitrile	0.00847	U	1.13	U	1.25	U	0.23
TO-15	Acetone	0.548		181.39		5.92	J	13.93
TO-15	Methyl iodide	0.00424	U	0.58	U	0.64	U	0.12
TO-15	1,1-Dichloroethene	0.0100	U	1.32	U	1.46	U	0.26

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	SF-3CR	STA-3CR-5	STA-3CR-10	SF-3CRD		SF-3CRD	
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>		ug/m <sup>2</sup> ,min-1	
TO-15	Freon 113	0.0196	U 2.58	U 2.84	U 0.52	U	0.0200	U
TO-15	Dichloromethane	0.00924	U 2.32	J 1.31	U 0.24	U	0.00924	U
TO-15	Carbon disulfide	0.007	U 1.40	J 0.97	U 0.44	J	0.017	J
TO-15	trans-1,2-Dichloroethene	0.00655	U 0.87	U 0.96	U 0.17	U	0.00655	U
TO-15	Methyl tert butyl ether	0.0062	U 0.81	U 1.57	J 0.16	U	0.0062	U
TO-15	1,1-Dichloroethane	0.0104	U 1.35	U 1.49	U 0.27	U	0.0104	U
TO-15	Vinyl acetate	0.00732	U 0.94	U 1.04	U 0.19	U	0.00732	U
TO-15	2-Butanone	0.291	26.88	1.01	U 5.35		0.206	
TO-15	Bromochloromethane	0.00655	U 0.88	J 0.94	U 0.17	U	0.00655	U
TO-15	Isobutyl alcohol	0.00578	U 0.76	U 0.84	U 0.15	U	0.00578	U
TO-15	cis-1,2-Dichloroethene	0.0104	U 1.35	U 1.49	U 0.27	U	0.0104	U
TO-15	2,2-Dichloropropane	0.0096	U 1.25	U 1.38	U 0.25	U	0.0096	U
TO-15	Chloroform	0.0370	J 7.78	J 2.11	J 0.87	J	0.0335	U
TO-15	1,1,1-Trichloroethane	0.0139	U 1.84	U 2.03	U 0.37	U	0.0142	U
TO-15	1,2-Dichloroethane	0.0104	U 1.38	U 1.52	U 0.28	U	0.0108	U
TO-15	1,1-Dichloropropene	0.00693	U 0.91	U 1.00	U 0.18	U	0.00693	U
TO-15	Benzene	0.0127	J 3.81	J 2.35	J 0.25	J	0.0096	J
TO-15	Carbon tetrachloride	0.0162	U 2.12	U 2.34	U 0.42	U	0.0162	U
TO-15	n-Heptane	0.00578	U 1.32	J 0.83	U 0.15	U	0.00578	U
TO-15	1,2-Dichloropropane	0.0119	U 1.57	U 1.73	U 0.31	U	0.0119	U
TO-15	1,4 Dioxane	0.0169	U 2.24	U 2.47	U 0.45	U	0.0173	U
TO-15	Dibromomethane	0.00616	U 0.81	U 0.90	U 0.16	U	0.00616	U
TO-15	Trichloroethene	0.0139	U 1.83	U 2.01	U 0.37	U	0.0142	U
TO-15	Bromodichloromethane	0.00616	U 0.82	U 0.90	U 0.16	U	0.00616	U
TO-15	Methyl Isobutyl Ketone	0.00732	U 0.94	U 1.04	U 0.27	J	0.01040	U
TO-15	cis-1,3-Dichloropropene	0.0123	U 1.59	U 1.75	U 0.32	U	0.0123	U
TO-15	Toluene	0.0096	U 13.20	1.41	U 0.26	U	0.0100	U
TO-15	trans-1,3-Dichloropropene	0.0119	U 1.56	U 1.72	U 0.31	U	0.0119	U
TO-15	1,1,2-Trichloroethane	0.0139	U 1.84	U 2.03	U 0.37	U	0.0142	U
TO-15	2-Hexanone	0.00693	J 0.88	U 0.97	U 0.19	J	0.00732	U
TO-15	1,3-Dichloropropane	0.00693	U 0.92	U 1.02	U 0.18	U	0.00693	U
TO-15	Dibromochloromethane	0.00770	U 1.03	U 1.14	U 0.21	U	0.00809	U
TO-15	1,2-Dibromoethane	0.0200	U 2.64	U 2.91	U 0.53	U	0.0204	U
TO-15	Tetrachloroethene	0.0173	U 2.29	U 2.52	U 0.46	U	0.0177	U
TO-15	Chlorobenzene	0.0119	U 1.55	U 1.71	U 0.31	U	0.0119	U
TO-15	1,1,1,2-Tetrachloroethane	0.00655	U 0.86	U 0.95	U 0.17	U	0.00655	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	SF-3CR	STA-3CR-5	STA-3CR-10	SF-3CRD		SF-3CRD	
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>
TO-15	Ethylbenzene	0.0116	U 4.65	J 1.64	U 0.30	U 0.0116	U	
TO-15	m & p-Xylene	0.0227	U 34.51	J 3.26	U 0.59	U 0.0227	U	
TO-15	Styrene	0.0112	U 1.45	J 1.60	U 0.29	U 0.0112	U	
TO-15	Bromoform	0.00655	U 0.84	J 0.93	U 0.17	U 0.00655	U	
TO-15	o-Xylene	0.0112	U 14.44	J 1.61	U 0.29	U 0.0112	U	
TO-15	1,1,2,2-Tetrachloroethane	0.0177	U 2.31	J 2.55	U 0.46	U 0.0177	U	
TO-15	1,2,3-Trichloropropane	0.00693	U 0.90	J 0.99	U 0.18	U 0.00693	U	
TO-15	n-Propylbenzene	0.00847	U 7.40	J 1.23	U 0.22	U 0.00847	U	
TO-15	Isopropylbenzene	0.00886	U 32.10	J 1.25	U 0.23	U 0.00886	U	
TO-15	1,3,5-Trimethylbenzene	0.0131	U 9.48	J 1.90	U 0.34	U 0.0131	U	
TO-15	tert-butyl benzene	0.00847	U 5.55	J 1.22	U 0.22	U 0.00847	U	
TO-15	1,2,4-Trimethylbenzene	0.0127	U 37.43	J 1.83	U 0.33	U 0.0127	U	
TO-15	sec-butylbenzene	0.00886	U 1.73	J 1.30	U 0.24	U 0.00924	U	
TO-15	1,3-Dichlorobenzene	0.0154	U 2.03	J 2.23	U 0.41	U 0.0158	U	
TO-15	Isopropyltoluene	0.00886	U 1.86	J 1.28	U 0.23	U 0.00886	U	
TO-15	Benzyl chloride	0.0154	U 2.01	J 2.22	U 0.40	U 0.0154	U	
TO-15	1,4-Dichlorobenzene	0.0308	U 4.05	J 4.46	U 0.81	U 0.0312	U	
TO-15	n-Butylbenzene	0.0166	U 6.74	J 2.40	U 0.44	U 0.0169	U	
TO-15	1,2-Dichlorobenzene	0.0304	U 3.97	J 4.38	U 0.79	U 0.0304	U	
TO-15	1,2-Dibromo-3-chloropropane	0.0816	U 10.70	J 11.78	U 2.14	U 0.0824	U	
TO-15 SIM	1,2,4-Trichlorobenzene	0.0385	U 5.05	J 5.56	U 1.01	U 0.0389	U	
TO-15	Hexachlorobutadiene	0.0554	U 7.26	J 8.00	U 1.45	U 0.0558	U	

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	STA-3C-5-DUP		STA-3C-10-DUP	
		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	8.123		26.9	
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.233	U	0.246	U
TO-15 SIM	1,3-Dichlorobenzene	0.204	U	0.215	U
TO-15 SIM	Benzyl chloride	0.096	U	0.101	U
TO-15 SIM	1,4-Dichlorobenzene	0.204	U	0.215	U
TO-15 SIM	1,2-Dichlorobenzene	0.200	U	0.211	U
TO-15 SIM	Hexachlorobutadiene	0.393	J	0.386	U
TO-15 SIM	Naphthalene	1.296	J	1.029	J
TO-15 SIM	1,2,3-Trichloropropane	0.182	U	0.192	U
TO-15 SIM	Vinyl chloride	0.089	U	0.093	U
TO-15 SIM	Dichloromethane	0.486	J	0.517	J
TO-15 SIM	Chloroform	10.508		16.905	
TO-15 SIM	1,2-Dichloroethane	0.139	U	0.146	U
TO-15 SIM	Benzene	4.527		2.276	
TO-15 SIM	Carbon tetrachloride	0.770	J	0.826	J
TO-15 SIM	1,2-Dichloropropane	0.159	U	0.167	U
TO-15 SIM	Trichloroethene	0.184	U	0.277	J
TO-15 SIM	Bromodichloromethane	0.083	U	0.087	U
TO-15 SIM	1,2-Dibromoethane	0.266	U	0.281	U
TO-15 SIM	1,1,2-Trichloroethane	0.185	U	0.195	U
TO-15 SIM	Tetrachloroethene	0.749	J	5.533	
TO-15 SIM	Dibromochloromethane	0.209	U	0.220	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	1.248		1.225	
		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	8.123		26.9	
TO-15	Dichlorodifluoromethane	3.53	J	2.13	J
TO-15	Chloromethane	2.30	J	1.57	J
TO-15	Vinyl chloride	0.89	U	0.93	U
TO-15	Bromomethane	1.34	U	1.42	U
TO-15	Chloroethane	0.91	U	0.96	U
TO-15	Ethanol	20.02		12.18	
TO-15	Trichlorofluoromethane	1.98	J	2.05	U
TO-15	Acetonitrile	1.14	U	1.20	U
TO-15	Acetone	65.45		54.63	
TO-15	Methyl iodide	0.58	U	0.62	U
TO-15	1,1-Dichloroethene	1.33	U	1.41	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	STA-3C-5-DUP		STA-3C-10-DUP	
		ug/m3		ug/m3	
TO-15	Freon 113	2.60	U	2.74	U
TO-15	Dichloromethane	1.20	U	1.27	U
TO-15	Carbon disulfide	10.67		0.93	U
TO-15	trans-1,2-Dichloroethene	0.88	U	0.92	U
TO-15	Methyl tert butyl ether	0.81	U	0.86	U
TO-15	1,1-Dichloroethane	1.36	U	1.44	U
TO-15	Vinyl acetate	0.95	U	1.00	U
TO-15	2-Butanone	16.79		15.94	
TO-15	Bromochloromethane	0.86	U	0.91	U
TO-15	Isobutyl alcohol	0.77	U	0.81	U
TO-15	cis-1,2-Dichloroethene	1.36	U	1.43	U
TO-15	2,2-Dichloropropane	1.26	U	1.33	U
TO-15	Chloroform	11.56		16.07	
TO-15	1,1,1-Trichloroethane	1.85	U	1.95	U
TO-15	1,2-Dichloroethane	1.39	U	1.46	U
TO-15	1,1-Dichloropropene	0.92	U	0.97	U
TO-15	Benzene	6.84		3.18	J
TO-15	Carbon tetrachloride	2.14	U	2.25	U
TO-15	n-Heptane	1.21	J	1.12	J
TO-15	1,2-Dichloropropane	1.59	U	1.67	U
TO-15	1,4 Dioxane	2.26	U	2.38	U
TO-15	Dibromomethane	0.82	U	0.86	U
TO-15	Trichloroethene	1.84	U	1.94	U
TO-15	Bromodichloromethane	0.83	U	0.87	U
TO-15	Methyl Isobutyl Ketone	2.26	J	1.55	J
TO-15	cis-1,3-Dichloropropene	1.60	U	1.69	U
TO-15	Toluene	7.49		4.68	J
TO-15	trans-1,3-Dichloropropene	1.57	U	1.66	U
TO-15	1,1,2-Trichloroethane	1.85	U	1.95	U
TO-15	2-Hexanone	1.85	J	2.33	J
TO-15	1,3-Dichloropropane	0.93	U	0.98	U
TO-15	Dibromochloromethane	1.04	U	1.10	U
TO-15	1,2-Dibromoethane	2.66	U	2.81	U
TO-15	Tetrachloroethene	2.30	U	10.33	J
TO-15	Chlorobenzene	1.56	U	1.65	U
TO-15	1,1,1,2-Tetrachloroethane	0.87	U	0.92	U

Table 3-3C. Summary Data for Station 3 Location Center.

METHOD	COMPOUND	STA-3C-5-DUP		STA-3C-10-DUP	
		ug/m3		ug/m3	
TO-15	Ethylbenzene	1.50	U	1.59	U
TO-15	m & p-Xylene	5.22	J	3.58	J
TO-15	Styrene	1.46	U	1.54	U
TO-15	Bromoform	0.85	U	0.90	U
TO-15	o-Xylene	2.02	J	1.56	U
TO-15	1,1,2,2-Tetrachloroethane	2.33	U	2.46	U
TO-15	1,2,3-Trichloropropane	0.91	U	0.96	U
TO-15	n-Propylbenzene	1.13	U	1.19	U
TO-15	Isopropylbenzene	1.15	U	1.21	U
TO-15	1,3,5-Trimethylbenzene	1.74	U	1.83	U
TO-15	tert-butyl benzene	1.11	U	1.18	U
TO-15	1,2,4-Trimethylbenzene	1.67	U	1.76	U
TO-15	sec-butylbenzene	1.19	U	1.25	U
TO-15	1,3-Dichlorobenzene	2.04	U	2.15	U
TO-15	Isopropyltoluene	1.17	U	1.23	U
TO-15	Benzyl chloride	2.03	U	2.14	U
TO-15	1,4-Dichlorobenzene	4.08	U	4.31	U
TO-15	n-Butylbenzene	2.19	U	2.31	U
TO-15	1,2-Dichlorobenzene	4.00	U	4.22	U
TO-15	1,2-Dibromo-3-chloropropane	10.78	U	11.37	U
TO-15 SIM	1,2,4-Trichlorobenzene	5.09	U	6.11	J
TO-15	Hexachlorobutadiene	7.32	U	7.71	U

Table 3-4N. Summary Data for Station 4 Location North.

METHOD	COMPOUND	SF-4N		SF-4N		STA-4N-5		STA-4N-10	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
ASTM 1946	% Helium Trace Gas	NA		NA		0.528		0.027	J
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.047	U	0.00181	U	0.280	U	0.282	U
TO-15 SIM	1,3-Dichlorobenzene	0.041	U	0.00158	U	0.245	U	0.247	U
TO-15 SIM	Benzyl chloride	0.019	U	0.00073	U	0.116	U	0.116	U
TO-15 SIM	1,4-Dichlorobenzene	0.049	J	0.00189	J	0.245	U	0.247	U
TO-15 SIM	1,2-Dichlorobenzene	0.040	U	0.00154	U	0.241	U	0.242	U
TO-15 SIM	Hexachlorobutadiene	0.074	U	0.00285	U	0.440	U	0.442	U
TO-15 SIM	Naphthalene	0.116	J	0.00447	J	0.470	U	0.473	U
TO-15 SIM	1,2,3-Trichloropropane	0.037	U	0.00142	U	0.219	U	0.220	U
TO-15 SIM	Vinyl chloride	0.018	U	0.000693	U	0.106	U	0.107	U
TO-15 SIM	Dichloromethane	0.032	J	0.00123	J	0.463	J	0.145	U
TO-15 SIM	Chloroform	0.480		0.0185		32.201	E	0.201	U
TO-15 SIM	1,2-Dichloroethane	0.028	U	0.00108	U	0.167	U	0.168	U
TO-15 SIM	Benzene	0.205		0.00789		1.488		0.517	J
TO-15 SIM	Carbon tetrachloride	0.059	J	0.00227	J	2.088		0.258	U
TO-15 SIM	1,2-Dichloropropane	0.032	U	0.00123	U	0.190	U	0.192	U
TO-15 SIM	Trichloroethene	0.037	U	0.00142	U	0.221	U	0.223	U
TO-15 SIM	Bromodichloromethane	0.017	U	0.00065	U	0.099	U	0.100	U
TO-15 SIM	1,2-Dibromoethane	0.054	U	0.00208	U	0.320	U	0.322	U
TO-15 SIM	1,1,2-Trichloroethane	0.037	U	0.00142	U	0.223	U	0.224	U
TO-15 SIM	Tetrachloroethene	0.046	U	0.00177	U	0.501	J	0.279	U
TO-15 SIM	Dibromochloromethane	0.042	U	0.00162	U	0.251	U	0.252	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.155	J	0.00597	J	1.446		0.525	U
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.528		0.027	J
TO-15	Dichlorodifluoromethane	0.35	U	0.0135	U	2.08	U	2.09	U
TO-15	Chloromethane	0.37	J	0.0142	J	1.94	J	0.85	U
TO-15	Vinyl chloride	0.18	U	0.00693	U	1.06	U	1.07	U
TO-15	Bromomethane	0.27	U	0.0104	U	1.62	U	1.63	U
TO-15	Chloroethane	0.23	J	0.0089	J	1.10	U	1.10	U
TO-15	Ethanol	0.60	J	0.0231	J	2.60	U	2.61	U
TO-15	Trichlorofluoromethane	0.39	U	0.0150	U	2.34	U	2.35	U
TO-15	Acetonitrile	0.23	U	0.00886	U	1.37	U	1.38	U
TO-15	Acetone	16.71		0.643		17.34	J	681.04	
TO-15	Methyl iodide	0.12	U	0.00462	U	0.70	U	0.71	U
TO-15	1,1-Dichloroethene	0.27	U	0.0104	U	1.60	U	1.61	U

Table 3-4N. Summary Data for Station 4 Location North.

METHOD	COMPOUND	SF-4N		SF-4N		STA-4N-5		STA-4N-10	
TO-15	Freon 113	0.52	U	0.0200	U	3.13	U	3.15	U
TO-15	Dichloromethane	0.24	U	0.00924	U	1.44	U	1.55	J
TO-15	Carbon disulfide	<b>1.55</b>		<b>0.0597</b>		1.06	U	1.72	J
TO-15	trans-1,2-Dichloroethene	0.18	U	0.00693	U	1.05	U	1.06	U
TO-15	Methyl tert butyl ether	0.16	U	0.00616	U	0.98	U	0.99	U
TO-15	1,1-Dichloroethane	0.27	U	0.0104	U	1.64	U	1.65	U
TO-15	Vinyl acetate	0.19	U	0.0073	U	1.14	U	1.15	U
TO-15	2-Butanone	<b>7.02</b>		<b>0.270</b>		<b>5.76</b>		<b>169.37</b>	
TO-15	Bromochloromethane	0.17	U	0.00655	U	1.04	U	1.04	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	0.92	U	0.93	U
TO-15	cis-1,2-Dichloroethene	0.27	U	0.0104	U	1.63	U	1.64	U
TO-15	2,2-Dichloropropane	0.25	U	0.0096	U	1.51	U	1.52	U
TO-15	Chloroform	0.38	J	0.0146	J	<b>125.18</b>		<b>278.35</b>	
TO-15	1,1,1-Trichloroethane	0.37	U	0.0142	U	2.23	U	2.24	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	1.67	U	1.68	U
TO-15	1,1-Dichloropropene	0.18	U	0.0069	U	1.10	U	1.11	U
TO-15	Benzene	0.33	J	0.0127	J	3.48	J	5.22	J
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	3.56	J	5.71	J
TO-15	n-Heptane	0.15	U	0.00578	U	2.75	J	<b>5.89</b>	
TO-15	1,2-Dichloropropane	0.32	U	0.0123	U	1.90	U	1.92	U
TO-15	1,4 Dioxane	0.45	U	0.0173	U	2.71	U	2.73	U
TO-15	Dibromomethane	0.17	U	0.00655	U	0.98	U	0.99	U
TO-15	Trichloroethene	0.37	U	0.0142	U	2.21	U	2.23	U
TO-15	Bromodichloromethane	0.17	U	0.00655	U	0.99	U	1.00	U
TO-15	Methyl Isobutyl Ketone	0.29	J	0.0112	J	1.14	U	1.15	U
TO-15	cis-1,3-Dichloropropene	0.32	U	0.0123	U	1.93	U	1.94	U
TO-15	Toluene	0.26	U	0.0100	U	2.42	J	<b>9.35</b>	
TO-15	trans-1,3-Dichloropropene	0.32	U	0.0123	U	1.89	U	1.90	U
TO-15	1,1,2-Trichloroethane	0.37	U	0.0142	U	2.23	U	2.24	U
TO-15	2-Hexanone	0.23	J	0.00886	J	1.07	U	<b>28.28</b>	
TO-15	1,3-Dichloropropane	0.19	U	0.00732	U	1.12	U	1.13	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	1.25	U	1.26	U
TO-15	1,2-Dibromoethane	0.54	U	0.0208	U	3.20	U	3.22	U
TO-15	Tetrachloroethene	0.46	U	0.0177	U	2.77	U	2.79	U
TO-15	Chlorobenzene	0.32	U	0.0123	U	1.88	U	1.89	U
TO-15	1,1,1,2-Tetrachloroethane	0.18	U	0.00693	U	1.05	U	1.05	U
TO-15	Ethylbenzene	0.30	U	0.0116	U	1.81	U	1.82	U

Table 3-4N. Summary Data for Station 4 Location North.

METHOD	COMPOUND	SF-4N		SF-4N		STA-4N-5		STA-4N-10	
TO-15	<b>m &amp; p-Xylene</b>	0.60	U	0.0231	U	3.58	U	3.60	U
TO-15	<b>Styrene</b>	0.29	U	0.0112	U	1.76	U	1.77	U
TO-15	<b>Bromoform</b>	0.17	U	0.00655	U	1.02	U	1.03	U
TO-15	<b>o-Xylene</b>	0.30	U	0.0116	U	1.77	U	1.78	U
TO-15	<b>1,1,2,2-Tetrachloroethane</b>	0.47	U	0.0181	U	2.80	U	2.82	U
TO-15	<b>1,2,3-Trichloropropane</b>	0.18	U	0.00693	U	1.09	U	1.10	U
TO-15	<b>n-Propylbenzene</b>	0.23	U	0.00886	U	1.36	U	1.37	U
TO-15	<b>Isopropylbenzene</b>	0.23	U	0.00886	U	1.38	U	3.02	J
TO-15	<b>1,3,5-Trimethylbenzene</b>	0.35	U	0.0135	U	2.08	U	2.10	U
TO-15	<b>tert-butyl benzene</b>	0.22	U	0.00847	U	1.34	U	1.35	U
TO-15	<b>1,2,4-Trimethylbenzene</b>	0.34	U	0.0131	U	2.01	U	2.02	U
TO-15	<b>sec-butylbenzene</b>	0.24	U	0.00924	U	1.43	U	1.44	U
TO-15	<b>1,3-Dichlorobenzene</b>	0.41	U	0.0158	U	2.45	U	2.47	U
TO-15	<b>Isopropyltoluene</b>	0.24	J	0.00924	J	1.41	U	1.41	U
TO-15	<b>Benzyl chloride</b>	0.41	U	0.0158	U	2.44	U	2.45	U
TO-15	<b>1,4-Dichlorobenzene</b>	0.82	U	0.0316	U	4.91	U	4.94	U
TO-15	<b>n-Butylbenzene</b>	0.44	U	0.0169	U	2.64	U	2.65	U
TO-15	<b>1,2-Dichlorobenzene</b>	0.81	U	0.0312	U	4.81	U	4.84	U
TO-15	<b>1,2-Dibromo-3-chloropropane</b>	2.17	U	0.0835	U	12.95	U	13.04	U
TO-15 SIM	<b>1,2,4-Trichlorobenzene</b>	1.03	U	0.0397	U	6.11	U	6.15	U
TO-15	<b>Hexachlorobutadiene</b>	1.47	U	0.0566	U	8.79	U	8.85	U

Table 3-4S. Summary Data for Station 4 Location South.

METHOD	COMPOUND	SF-4S		SF-4S		STA-4S-5		STA-4S-10	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
ASTM 1946	% Helium Trace Gas	NA		NA		0.178		0.020	U
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.047	U	0.00181	U	0.806	J	0.762	J
TO-15 SIM	1,3-Dichlorobenzene	0.041	U	0.00158	U	0.246	J	0.260	U
TO-15 SIM	Benzyl chloride	0.020	U	0.00077	U	0.107	U	0.122	U
TO-15 SIM	1,4-Dichlorobenzene	0.041	U	0.00158	U	0.269	J	0.268	J
TO-15 SIM	1,2-Dichlorobenzene	0.041	U	0.00158	U	0.438	J	0.431	J
TO-15 SIM	Hexachlorobutadiene	0.077	J	0.00296	J	1.614	J	1.660	J
TO-15 SIM	Naphthalene	0.242	J	0.00932	J	5.880		5.380	
TO-15 SIM	1,2,3-Trichloropropane	0.037	U	0.00142	U	1.231	J	1.251	J
TO-15 SIM	Vinyl chloride	0.018	U	0.00069	U	0.428	J	0.113	U
TO-15 SIM	Dichloromethane	0.064	J	0.00246	J	0.667		0.652	J
TO-15 SIM	Chloroform	0.068	J	0.00262	J	110.502	E	197.818	E
TO-15 SIM	1,2-Dichloroethane	0.028	U	0.00108	U	0.154	U	0.177	U
TO-15 SIM	Benzene	0.137		0.00527		17.046		3.237	
TO-15 SIM	Carbon tetrachloride	0.111	J	0.00427	J	3.567		5.526	
TO-15 SIM	1,2-Dichloropropane	0.032	U	0.00123	U	0.176	U	0.202	U
TO-15 SIM	Trichloroethene	0.037	U	0.00142	U	5.341		0.234	U
TO-15 SIM	Bromodichloromethane	0.017	U	0.00065	U	0.091	U	0.105	U
TO-15 SIM	1,2-Dibromoethane	0.054	U	0.00208	U	0.295	U	0.338	U
TO-15 SIM	1,1,2-Trichloroethane	0.038	U	0.00146	U	0.205	U	0.236	U
TO-15 SIM	Tetrachloroethene	0.047	U	0.00181	U	1.113	J	1.477	J
TO-15 SIM	Dibromochloromethane	0.042	U	0.00162	U	0.231	U	0.265	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.287		0.0110		10.830		11.152	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.178		0.020	U
TO-15	Dichlorodifluoromethane	0.61	J	0.0235	J	2.64	J	2.20	U
TO-15	Chloromethane	0.27	J	0.0104	J	4.94		0.89	U
TO-15	Vinyl chloride	0.18	U	0.00693	U	0.98	U	1.13	U
TO-15	Bromomethane	0.27	U	0.0104	U	1.49	U	1.71	U
TO-15	Chloroethane	0.19	U	0.0073	U	1.01	U	1.16	U
TO-15	Ethanol	2.09	J	0.0805	J	4.49	J	2.75	U
TO-15	Trichlorofluoromethane	0.40	U	0.0154	U	2.16	U	2.47	U
TO-15	Acetonitrile	0.23	U	0.00886	U	1.27	U	1.45	U
TO-15	Acetone	10.54		0.4058		401.24		681.75	
TO-15	Methyl iodide	0.12	U	0.0046	U	0.65	U	0.74	U
TO-15	1,1-Dichloroethene	0.27	U	0.0104	U	1.48	U	1.69	U

Table 3-4S. Summary Data for Station 4 Location South.

METHOD	COMPOUND	SF-4S		SF-4S		STA-4S-5		STA-4S-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
TO-15	Freon 113	0.53	U	0.0204	U	2.88	U	3.31	U
TO-15	Dichloromethane	0.24	U	0.0092	U	1.33	U	1.53	U
TO-15	Carbon disulfide	0.18	U	0.0069	U	2.38	J	2.92	J
TO-15	trans-1,2-Dichloroethene	0.18	U	0.0069	U	0.97	U	1.11	U
TO-15	Methyl tert butyl ether	0.17	U	0.0065	U	0.90	U	1.04	U
TO-15	1,1-Dichloroethane	0.28	U	0.0108	U	1.51	U	1.73	U
TO-15	Vinyl acetate	0.19	U	0.0073	U	1.05	U	1.21	U
TO-15	2-Butanone	3.33		0.1282		176.26		407.44	
TO-15	Bromochloromethane	0.18	U	0.00693	U	0.96	U	1.10	U
TO-15	Isobutyl alcohol	0.16	U	0.00616	U	0.85	U	0.98	U
TO-15	cis-1,2-Dichloroethene	0.28	U	0.0108	U	1.51	U	1.73	U
TO-15	2,2-Dichloropropane	0.26	U	0.0100	U	1.40	U	1.60	U
TO-15	Chloroform	0.34	U	0.0131	U	103.16		225.84	
TO-15	1,1,1-Trichloroethane	0.38	U	0.0146	U	2.05	U	2.36	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	1.54	U	1.77	U
TO-15	1,1-Dichloropropene	0.19	U	0.0073	U	1.02	U	1.16	U
TO-15	Benzene	0.33	J	0.0127	J	14.75		3.05	J
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	3.09	J	5.50	J
TO-15	n-Heptane	0.15	U	0.00578	U	8.57		11.12	
TO-15	1,2-Dichloropropane	0.32	U	0.0123	U	1.76	U	2.02	U
TO-15	1,4 Dioxane	0.46	J	0.0177	J	2.50	U	2.87	U
TO-15	Dibromomethane	0.17	U	0.00655	U	0.91	U	1.04	U
TO-15	Trichloroethene	0.37	U	0.0142	U	6.16	J	2.34	U
TO-15	Bromodichloromethane	0.17	U	0.00655	U	0.91	U	1.05	U
TO-15	Methyl Isobutyl Ketone	0.19	U	0.0073	U	1.37	J	2.81	J
TO-15	cis-1,3-Dichloropropene	0.33	U	0.0127	U	1.78	U	2.04	U
TO-15	Toluene	0.26	U	0.0100	U	15.13		3.65	J
TO-15	trans-1,3-Dichloropropene	0.32	U	0.0123	U	1.74	U	2.00	U
TO-15	1,1,2-Trichloroethane	0.38	U	0.0146	U	2.05	U	2.36	U
TO-15	2-Hexanone	0.20	J	0.00770	J	32.52		57.68	
TO-15	1,3-Dichloropropane	0.19	U	0.00732	U	1.03	U	1.18	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	1.15	U	1.32	U
TO-15	1,2-Dibromoethane	0.54	U	0.0208	U	2.95	U	3.38	U
TO-15	Tetrachloroethene	0.47	U	0.0181	U	2.55	U	2.93	U
TO-15	Chlorobenzene	0.32	U	0.0123	U	1.73	U	1.99	U
TO-15	1,1,1,2-Tetrachloroethane	0.18	U	0.00693	U	0.97	U	1.11	U

Table 3-4S. Summary Data for Station 4 Location South.

METHOD	COMPOUND	SF-4S		SF-4S		STA-4S-5		STA-4S-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.31	U	0.0119	U	2.62	J	1.91	U
TO-15	m & p-Xylene	0.61	U	0.0235	U	10.47	J	4.02	J
TO-15	Styrene	0.30	U	0.0116	U	1.62	U	1.86	U
TO-15	Bromoform	0.17	U	0.00655	U	0.94	U	1.08	U
TO-15	o-Xylene	0.30	U	0.0116	U	4.11	J	1.88	U
TO-15	1,1,2,2-Tetrachloroethane	0.47	U	0.0181	U	2.58	U	2.96	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	1.01	U	1.16	U
TO-15	n-Propylbenzene	0.23	U	0.00886	U	1.25	U	1.44	U
TO-15	Isopropylbenzene	0.23	U	0.00886	U	6.88		1.46	U
TO-15	1,3,5-Trimethylbenzene	0.35	U	0.0135	U	1.92	U	2.21	U
TO-15	tert-butyl benzene	0.23	U	0.00886	U	1.24	U	1.42	U
TO-15	1,2,4-Trimethylbenzene	0.34	U	0.0131	U	5.44	J	2.12	U
TO-15	sec-butylbenzene	0.24	U	0.00924	U	1.32	U	1.51	U
TO-15	1,3-Dichlorobenzene	0.41	U	0.0158	U	2.26	U	2.60	U
TO-15	Isopropyltoluene	0.24	U	0.00924	U	1.30	U	1.49	U
TO-15	Benzyl chloride	0.41	U	0.0158	U	2.25	U	2.58	U
TO-15	1,4-Dichlorobenzene	0.83	U	0.0320	U	4.53	U	5.19	U
TO-15	n-Butylbenzene	0.45	U	0.0173	U	2.43	U	2.79	U
TO-15	1,2-Dichlorobenzene	0.81	U	0.0312	U	4.44	U	5.09	U
TO-15	1,2-Dibromo-3-chloropropane	2.19	U	0.0843	U	11.95	U	13.71	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.03	U	0.0397	U	5.64	U	6.47	U
TO-15	Hexachlorobutadiene	1.49	U	0.0574	U	8.11	U	9.30	U

Table 3-4E. Summary Data for Station 4 Location East.

METHOD	COMPOUND	SF-4E		SF-4E		STA-4E-5		STA-4E-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.022		0.020	U
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.047	U	0.00181	U	0.275	U	0.293	U
TO-15 SIM	1,3-Dichlorobenzene	0.041	U	0.00158	U	0.241	U	0.256	U
TO-15 SIM	Benzyl chloride	0.019	U	0.00073	U	0.113	U	0.121	U
TO-15 SIM	1,4-Dichlorobenzene	0.148	J	0.00570	J	0.241	U	0.256	U
TO-15 SIM	1,2-Dichlorobenzene	0.133	J	0.00512	J	0.236	U	0.251	U
TO-15 SIM	Hexachlorobutadiene	0.074	U	0.00285	U	0.431	U	0.459	U
TO-15 SIM	Naphthalene	0.083	J	0.00320	J	0.965	J	2.029	
TO-15 SIM	1,2,3-Trichloropropane	0.037	U	0.00142	U	0.215	U	0.229	U
TO-15 SIM	Vinyl chloride	0.018	U	0.00069	U	0.104	U	0.111	U
TO-15 SIM	Dichloromethane	0.024	U	0.00092	U	0.246	J	1.014	
TO-15 SIM	Chloroform	0.675		0.02599		49.718	E	274.322	E
TO-15 SIM	1,2-Dichloroethane	0.028	U	0.00108	U	0.164	U	0.174	U
TO-15 SIM	Benzene	0.162		0.00624		1.933		53.468	E
TO-15 SIM	Carbon tetrachloride	0.064	J	0.00246	J	2.116		9.112	
TO-15 SIM	1,2-Dichloropropane	0.032	U	0.00123	U	0.187	U	0.199	U
TO-15 SIM	Trichloroethylene	11.871		0.45703		0.217	U	0.231	U
TO-15 SIM	Bromodichloromethane	0.017	U	0.00065	U	0.097	U	0.104	U
TO-15 SIM	1,2-Dibromoethane	0.054	U	0.00208	U	0.314	U	0.334	U
TO-15 SIM	1,1,2-Trichloroethane	0.037	U	0.00142	U	0.218	U	0.233	U
TO-15 SIM	Tetrachloroethylene	0.046	U	0.00177	U	0.980	J	2.235	
TO-15 SIM	Dibromochloromethane	0.042	U	0.00162	U	0.246	U	0.262	U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.124	J	0.0048	J	0.696	J	0.980	J
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.022		0.020	U
TO-15	Dichlorodifluoromethane	0.35	U	0.0135	U	3.28	J	2.17	U
TO-15	Chloromethane	0.14	U	0.00539	U	2.95	J	4.07	J
TO-15	Vinyl chloride	0.18	U	0.00693	U	1.04	U	1.11	U
TO-15	Bromomethane	0.27	U	0.0104	U	1.58	U	1.69	U
TO-15	Chloroethane	0.18	U	0.00693	U	1.92	J	1.41	J
TO-15	Ethanol	2.02	J	0.0778	J	24.39		4.96	J
TO-15	Trichlorofluoromethane	0.39	U	0.0150	U	2.29	U	2.44	U
TO-15	Acetonitrile	0.23	U	0.00886	U	1.35	U	1.43	U
TO-15	Acetone	8.78		0.338		422.14		29.94	
TO-15	Methyl iodide	0.12	U	0.00462	U	0.69	U	0.73	U
TO-15	1,1-Dichloroethene	0.27	U	0.0104	U	1.57	U	1.67	U

Table 3-4E. Summary Data for Station 4 Location East.

METHOD	COMPOUND	SF-4E		SF-4E		STA-4E-5		STA-4E-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3	
TO-15	Freon 113	0.52	U	0.0200	U	3.07	U	3.27	U
TO-15	Dichloromethane	0.24	U	0.00924	U	1.42	U	1.51	U
TO-15	Carbon disulfide	0.18	U	0.00693	U	1.55	J	2.41	J
TO-15	trans-1,2-Dichloroethene	0.18	U	0.00693	U	1.03	U	1.10	U
TO-15	Methyl tert butyl ether	0.16	U	0.00616	U	0.96	U	1.02	U
TO-15	1,1-Dichloroethane	0.27	U	0.0104	U	1.60	U	1.71	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	1.12	U	1.19	U
TO-15	2-Butanone	<b>3.76</b>		<b>0.145</b>		<b>89.51</b>		<b>8.62</b>	
TO-15	Bromochloromethane	0.17	U	0.00655	U	1.02	U	1.08	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	0.90	U	0.96	U
TO-15	cis-1,2-Dichloroethene	0.27	U	0.0104	U	1.60	U	1.71	U
TO-15	2,2-Dichloropropane	0.25	U	0.00963	U	1.49	U	1.58	U
TO-15	Chloroform	0.40	J	0.0154	J	<b>302.65</b>		<b>402.61</b>	
TO-15	1,1,1-Trichloroethane	0.37	U	0.0142	U	2.18	U	2.33	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	1.64	U	1.74	U
TO-15	1,1-Dichloropropene	0.18	U	0.00693	U	1.08	U	1.15	U
TO-15	Benzene	0.28	J	0.0108	J	<b>7.55</b>		<b>71.79</b>	
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	6.13	J	8.15	J
TO-15	n-Heptane	0.15	U	0.00578	U	3.80	J	<b>6.56</b>	
TO-15	1,2-Dichloropropane	0.32	U	0.0123	U	1.87	U	1.99	U
TO-15	1,4 Dioxane	0.45	U	0.0173	U	2.66	U	2.83	U
TO-15	Dibromomethane	0.17	U	0.00655	U	0.97	U	1.03	U
TO-15	Trichloroethene	<b>14.33</b>		<b>0.552</b>		2.17	U	2.31	U
TO-15	Bromodichloromethane	0.17	U	0.00655	U	0.97	U	1.04	U
TO-15	Methyl Isobutyl Ketone	0.22	J	0.00847	J	1.12	U	1.19	U
TO-15	cis-1,3-Dichloropropene	0.32	U	0.0123	U	1.89	U	2.01	U
TO-15	Toluene	0.26	U	0.0100	U	<b>28.22</b>		<b>114.07</b>	
TO-15	trans-1,3-Dichloropropene	0.32	U	0.0123	U	1.85	U	1.97	U
TO-15	1,1,2-Trichloroethane	0.37	U	0.0142	U	2.18	U	2.33	U
TO-15	2-Hexanone	0.18	U	0.00693	U	<b>9.18</b>		1.12	U
TO-15	1,3-Dichloropropane	0.19	U	0.00732	U	1.10	U	1.17	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	1.23	U	1.31	U
TO-15	1,2-Dibromoethane	0.54	U	0.0208	U	3.14	U	3.34	U
TO-15	Tetrachloroethene	0.46	U	0.0177	U	2.71	U	2.89	U
TO-15	Chlorobenzene	0.32	U	0.0123	U	1.84	U	1.96	U
TO-15	1,1,1,2-Tetrachloroethane	0.18	U	0.00693	U	1.03	U	1.09	U

Table 3-4E. Summary Data for Station 4 Location East.

METHOD	COMPOUND	SF-4E		SF-4E		STA-4E-5		STA-4E-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.30	U	0.0116	U	7.07	J	8.87	J
TO-15	m & p-Xylene	0.60	U	0.0231	U	77.17		42.37	
TO-15	Styrene	0.29	U	0.0112	U	1.72	U	1.84	U
TO-15	Bromoform	0.17	U	0.00655	U	1.00	U	1.07	U
TO-15	o-Xylene	0.30	U	0.0116	U	41.56		17.03	
TO-15	1,1,2,2-Tetrachloroethane	0.47	U	0.0181	U	2.75	U	2.93	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	1.07	U	1.14	U
TO-15	n-Propylbenzene	0.23	U	0.00886	U	5.10	J	2.78	J
TO-15	Isopropylbenzene	0.23	U	0.00886	U	41.35		9.49	
TO-15	1,3,5-Trimethylbenzene	0.35	U	0.0135	U	14.86		3.29	J
TO-15	tert-butyl benzene	0.22	U	0.00847	U	8.26		2.17	J
TO-15	1,2,4-Trimethylbenzene	0.34	U	0.0131	U	52.62		12.99	
TO-15	sec-butylbenzene	0.24	U	0.00924	U	1.40	U	1.49	U
TO-15	1,3-Dichlorobenzene	0.41	U	0.0158	U	2.41	U	2.56	U
TO-15	Isopropyltoluene	0.24	U	0.00924	U	1.38	U	1.47	U
TO-15	Benzyl chloride	0.41	U	0.0158	U	2.39	U	2.55	U
TO-15	1,4-Dichlorobenzene	0.82	U	0.0316	U	4.81	U	5.13	U
TO-15	n-Butylbenzene	0.44	U	0.0169	U	2.58	U	2.75	U
TO-15	1,2-Dichlorobenzene	0.81	U	0.0312	U	4.72	U	5.03	U
TO-15	1,2-Dibromo-3-chloropropane	2.17	U	0.0835	U	12.70	U	13.54	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.03	U	0.0397	U	6.00	U	6.39	U
TO-15	Hexachlorobutadiene	1.47	U	0.0566	U	8.62	U	9.19	U

Table 3-4W. Summary Data for Station 4 Location West.

COMPOUND	SF-4W ug/m3	SF-4W ug/m2,min-1	STA-4W-5 ug/m3	STA-4W-10 ug/m3	
% Helium Trace Gas	NA	NA	0.126	32.0	U
1,1,2,2-Tetrachloroethane	0.046	U	0.00177	J	0.778
1,3-Dichlorobenzene	0.041	U	0.00158	J	0.387
Benzyl chloride	0.019	U	0.00073	U	0.119
1,4-Dichlorobenzene	0.041	J	0.00158	J	0.283
1,2-Dichlorobenzene	0.040	U	0.00154	U	0.508
Hexachlorobutadiene	0.073	U	0.00281	J	1.760
Naphthalene	0.293	J	0.01128	J	2.828
1,2,3-Trichloropropane	0.036	U	0.00139	U	1.801
Vinyl chloride	0.018	U	0.00069	U	0.122
Dichloromethane	0.024	U	0.00092	J	0.517
Chloroform	0.320		0.01232	E	145.454
1,2-Dichloroethane	0.075	J	0.00289	J	0.192
Benzene	2.866		0.11034		0.829
Carbon tetrachloride	0.088	J	0.00339	J	5.406
1,2-Dichloropropane	0.031	U	0.00119	U	0.219
Trichloroethene	0.039	J	0.00150	J	0.254
Bromodichloromethane	0.016	U	0.00062	U	0.114
1,2-Dibromoethane	0.053	U	0.00204	U	0.367
1,1,2-Trichloroethane	0.037	U	0.00142	U	0.256
Tetrachloroethene	0.046	U	0.00177	J	1.083
Dibromochloromethane	0.041	U	0.00158	U	0.288
1,2-Dibromo-3-chloropropane	0.417		0.0161		12.746
	ug/m3		ug/m2,min-1		ug/m3
% Helium Trace Gas	NA	NA	0.126	32.0	U
Dichlorodifluoromethane	0.34	U	0.0131	J	2.14
Chloromethane	0.14	U	0.0054	J	3.45
Vinyl chloride	0.18	U	0.00693	U	1.22
Bromomethane	0.27	U	0.0104	U	1.85
Chloroethane	0.18	U	0.0069	U	1.26
Ethanol	0.46	J	0.0177	J	13.60
Trichlorofluoromethane	0.39	U	0.0150	U	2.69
Acetonitrile	0.23	U	0.00886	U	1.58
Acetone	3.39	J	0.1305	J	246.33
Methyl iodide	0.12	U	0.0046	U	0.81
1,1-Dichloroethene	0.26	U	0.0100	U	1.84
					113.92
					1.65
					U

Table 3-4W. Summary Data for Station 4 Location West.

COMPOUND	SF-4W		SF-4W		STA-4W-5		STA-4W-10	
	ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3	
Freon 113	0.52	U	0.0200	U	3.59	U	3.23	U
Dichloromethane	0.24	U	0.0092	U	1.66	U	1.49	U
Carbon disulfide	0.33	J	0.0127	J	1.22	U	4.55	J
trans-1,2-Dichloroethene	0.17	U	0.0065	U	1.21	U	1.09	U
Methyl tert butyl ether	0.16	U	0.0062	U	1.12	U	1.01	U
1,1-Dichloroethane	0.27	U	0.0104	U	1.88	U	1.69	U
Vinyl acetate	0.19	U	0.0073	U	1.31	U	1.18	U
2-Butanone	<b>1.49</b>		<b>0.0574</b>		<b>110.64</b>		<b>43.54</b>	
Bromochloromethane	0.17	U	0.00655	U	1.19	U	1.07	U
Isobutyl alcohol	0.15	U	0.00578	U	1.06	U	0.95	U
cis-1,2-Dichloroethene	0.27	U	0.0104	U	1.88	U	1.69	U
2,2-Dichloropropane	0.25	U	0.0096	U	1.74	U	1.56	U
Chloroform	0.33	U	0.0127	U	<b>111.38</b>		<b>111.77</b>	
1,1,1-Trichloroethane	0.37	U	0.0142	U	2.56	U	2.30	U
1,2-Dichloroethane	0.28	U	0.0108	U	1.92	U	1.72	U
1,1-Dichloropropene	0.18	U	0.0069	U	1.26	U	1.14	U
Benzene	<b>1.84</b>		<b>0.0708</b>		4.20	J	5.86	J
Carbon tetrachloride	0.42	U	0.0162	U	4.39	J	3.23	J
n-Heptane	0.75	J	0.02888	J	3.83	J	<b>7.86</b>	
1,2-Dichloropropane	0.31	U	0.0119	U	2.19	U	1.97	U
1,4 Dioxane	0.45	U	0.0173	U	3.11	U	2.80	U
Dibromomethane	0.16	U	0.00616	U	1.13	U	1.02	U
Trichloroethene	0.37	U	0.0142	U	2.54	U	2.29	U
Bromodichloromethane	0.16	U	0.00616	U	1.14	U	1.02	U
Methyl Isobutyl Ketone	0.19	U	0.0073	U	1.37	J	1.89	J
cis-1,3-Dichloropropene	0.32	U	0.0123	U	2.21	U	1.99	U
Toluene	<b>1.46</b>		<b>0.0562</b>		5.26	J	<b>13.23</b>	
trans-1,3-Dichloropropene	0.31	U	0.0119	U	2.17	U	1.95	U
1,1,2-Trichloroethane	0.37	U	0.0142	U	2.56	U	2.30	U
2-Hexanone	0.18	U	0.00693	U	<b>20.07</b>		1.11	U
1,3-Dichloropropane	0.18	U	0.00693	U	1.28	U	1.15	U
Dibromochloromethane	0.21	U	0.00809	U	1.44	U	1.29	U
1,2-Dibromoethane	0.53	U	0.0204	U	3.67	U	3.30	U
Tetrachloroethene	0.46	U	0.0177	U	3.18	U	2.86	U
Chlorobenzene	0.31	U	0.0119	U	2.16	U	1.94	U
1,1,1,2-Tetrachloroethane	0.17	U	0.00655	U	1.20	U	1.08	U

Table 3-4W. Summary Data for Station 4 Location West.

COMPOUND	SF-4W		SF-4W		STA-4W-5		STA-4W-10	
	ug/m3		ug/m2,min-1		ug/m3		ug/m3	
Ethylbenzene	0.86	J	0.0331	J	2.08	U	1.87	U
m & p-Xylene	<b>5.49</b>		<b>0.2114</b>		4.11	U	6.28	J
Styrene	0.29	U	0.0112	U	2.02	U	1.81	U
Bromoform	0.17	U	0.00655	U	1.17	U	1.05	U
o-Xylene	0.92	J	0.0354	J	2.04	U	2.83	J
1,1,2,2-Tetrachloroethane	0.46	U	0.0177	U	3.22	U	2.89	U
1,2,3-Trichloropropane	0.18	U	0.00693	U	1.25	U	1.13	U
n-Propylbenzene	0.50	J	0.01925	J	1.56	U	1.40	U
Isopropylbenzene	<b>1.54</b>		<b>0.05929</b>		1.58	U	1.98	J
1,3,5-Trimethylbenzene	0.93	J	0.0358	J	2.39	U	2.15	U
tert-butyl benzene	0.40	J	0.01540	J	1.54	U	1.38	U
1,2,4-Trimethylbenzene	<b>2.05</b>		<b>0.0789</b>		2.30	U	2.07	U
sec-butylbenzene	0.24	U	0.00924	U	1.64	U	1.47	U
1,3-Dichlorobenzene	0.41	U	0.0158	U	2.82	U	2.53	U
Isopropyltoluene	0.23	U	0.00886	U	1.61	U	1.45	U
Benzyl chloride	0.40	U	0.0154	U	2.80	U	2.51	U
1,4-Dichlorobenzene	0.81	U	0.0312	U	5.64	U	5.07	U
n-Butylbenzene	0.44	U	0.0169	U	3.03	U	2.72	U
1,2-Dichlorobenzene	0.79	U	0.0304	U	5.52	U	4.97	U
1,2-Dibromo-3-chloropropane	2.14	U	0.0824	U	14.88	U	13.37	U
<b>1,2,4-Trichlorobenzene</b>	1.01	U	0.0389	U	7.02	U	6.31	U
Hexachlorobutadiene	1.45	U	0.0558	U	10.10	U	9.08	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4C	SF-4C	STA-4C-5	STA-4C-5B	STA-4C-10
		ug/m <sup>3</sup>	ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	NA	NA	0.02	U 0.020	U 0.046 J
TO-15 SIM	<b>1,1,2,2-Tetrachloroethane</b>	0.048	U 0.00185	U 0.271	U 0.036	U 0.304 U
TO-15 SIM	<b>1,3-Dichlorobenzene</b>	0.042	U 0.00162	U 0.237	U 0.032	U 0.266 U
TO-15 SIM	<b>Benzyl chloride</b>	0.020	U 0.000770	U 0.112	U 0.015	U 0.125 U
TO-15 SIM	<b>1,4-Dichlorobenzene</b>	0.043	J 0.00166	J 0.237	U 0.032	U 0.266 U
TO-15 SIM	<b>1,2-Dichlorobenzene</b>	0.041	U 0.00158	U 7.271	J 0.031	U 0.261 U
TO-15 SIM	<b>Hexachlorobutadiene</b>	0.075	U 0.00289	U 0.425	U 0.057	U 0.476 U
TO-15 SIM	<b>Naphthalene</b>	0.080	U 0.00308	U 0.455	U 0.155	J 0.707 J
TO-15 SIM	<b>1,2,3-Trichloropropane</b>	0.037	U 0.00142	U 0.212	U 0.028	U 0.237 U
TO-15 SIM	<b>Vinyl chloride</b>	0.018	U 0.000693	U 0.103	U 0.014	U 0.211 J
TO-15 SIM	<b>Dichloromethane</b>	0.025	U 0.00096	U 0.909	U 0.019	U 2.082
TO-15 SIM	<b>Chloroform</b>	<b>0.174</b>	<b>0.00670</b>	<b>135.910</b>	E 0.026	U 250.450 E
TO-15 SIM	<b>1,2-Dichloroethane</b>	0.028	U 0.00108	U 0.161	U 0.022	U 0.181 U
TO-15 SIM	<b>Benzene</b>	<b>0.234</b>	<b>0.00901</b>	<b>5.251</b>	<b>0.121</b>	<b>15.075</b>
TO-15 SIM	<b>Carbon tetrachloride</b>	0.044	U 0.00169	U 3.565	U 0.033	U 6.550
TO-15 SIM	<b>1,2-Dichloropropane</b>	0.032	U 0.00123	U 0.184	U 0.025	U 0.206 U
TO-15 SIM	<b>Trichloroethylene</b>	0.038	U 0.00146	U 0.214	U 0.029	U 1.150 J
TO-15 SIM	<b>Bromodichloromethane</b>	0.017	U 0.000655	U 0.096	U 0.013	U 0.107 U
TO-15 SIM	<b>1,2-Dibromoethane</b>	0.054	U 0.00208	U 0.309	U 0.041	U 0.347 U
TO-15 SIM	<b>1,1,2-Trichloroethane</b>	0.038	U 0.00146	U 0.215	U 0.029	U 0.241 U
TO-15 SIM	<b>Tetrachloroethene</b>	0.047	U 0.00181	U 1.123	J 0.036	U 1.592
TO-15 SIM	<b>Dibromochloromethane</b>	0.043	U 0.00166	U 0.243	U 0.032	U 0.272 U
TO-15 SIM	<b>1,2-Dibromo-3-chloropropane</b>	0.121	J 0.00466	J 0.622	J 0.153	J 1.344 J
		ug/m <sup>3</sup>	ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	NA	NA	0.02	U 0.020	U 0.046 J
TO-15	<b>Dichlorodifluoromethane</b>	0.35	U 0.0135	U 2.17	J 0.27	U 2.25 U
TO-15	<b>Chloromethane</b>	0.39	J 0.0150	J 2.71	J 0.76	0.91 U
TO-15	<b>Vinyl chloride</b>	0.18	U 0.00693	U 1.03	U 0.14	U 1.15 U
TO-15	<b>Bromomethane</b>	0.28	U 0.0108	U 1.56	U 0.21	U 1.75 U
TO-15	<b>Chloroethane</b>	0.19	U 0.00732	U 1.06	U 0.14	U 1.19 U
TO-15	<b>Ethanol</b>	<b>4.04</b>	<b>0.156</b>	<b>39.89</b>	0.92	J 2.81 U
TO-15	<b>Trichlorofluoromethane</b>	0.40	U 0.0154	U 2.26	U 0.30	U 2.53 U
TO-15	<b>Acetonitrile</b>	0.23	U 0.00886	U 1.33	U 0.18	U 1.49 U
TO-15	<b>Acetone</b>	<b>9.95</b>	<b>0.383</b>	<b>364.04</b>	<b>4.30</b>	<b>586.26</b>
TO-15	<b>Methyl iodide</b>	0.12	U 0.00462	U 0.68	U 0.09	U 1.39 J
TO-15	<b>1,1-Dichloroethene</b>	0.27	U 0.0104	U 1.55	U 0.21	U 1.74 U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4C		SF-4C		STA-4C-5		STA-4C-5B		STA-4C-10	
		ug/m3		ug/m2,min-1		ug/m3		ug/m3		ug/m3	
TO-15	Freon 113	0.53	U	0.0204	U	3.03	U	0.40	U	3.39	U
TO-15	Dichloromethane	0.25	U	0.00963	U	1.40	U	0.19	U	1.57	U
TO-15	Carbon disulfide	<b>6.02</b>		<b>0.232</b>		1.31	J	0.14	U	2.90	J
TO-15	trans-1,2-Dichloroethene	0.18	U	0.00693	U	1.02	U	0.14	U	1.14	U
TO-15	Methyl tert butyl ether	0.17	U	0.0065	U	0.95	U	0.13	U	1.06	U
TO-15	1,1-Dichloroethane	0.28	U	0.0108	U	1.58	U	0.21	U	1.77	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	1.17	J	0.15	U	1.24	U
TO-15	2-Butanone	<b>3.25</b>		<b>0.125</b>		<b>230.72</b>		<b>1.79</b>		<b>248.03</b>	
TO-15	Bromochloromethane	0.18	U	0.00693	U	1.00	U	0.13	U	1.12	U
TO-15	Isobutyl alcohol	0.16	U	0.00616	U	0.89	U	0.12	U	1.00	U
TO-15	cis-1,2-Dichloroethene	0.28	U	0.0108	U	1.58	U	0.21	U	1.77	U
TO-15	2,2-Dichloropropane	0.26	U	0.0100	U	1.47	U	0.20	U	1.64	U
TO-15	Chloroform	0.34	U	0.0131	U	<b>137.30</b>		0.26	U	<b>239.03</b>	
TO-15	1,1,1-Trichloroethane	0.38	U	0.0146	U	2.15	U	0.29	U	2.41	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	1.61	U	0.22	U	1.81	U
TO-15	1,1-Dichloropropene	0.19	U	0.00732	U	1.07	U	0.14	U	1.19	U
TO-15	Benzene	0.39	J	0.0150	J	<b>7.35</b>		0.17	U	<b>18.72</b>	
TO-15	Carbon tetrachloride	0.44	U	0.0169	U	3.96	J	0.33	U	5.95	J
TO-15	n-Heptane	0.16	U	0.00616	U	<b>8.57</b>		0.12	U	<b>19.04</b>	
TO-15	1,2-Dichloropropane	0.32	U	0.0123	U	1.84	U	0.25	U	2.06	U
TO-15	1,4 Dioxane	0.46	U	0.0177	U	2.62	U	0.35	U	2.94	U
TO-15	Dibromomethane	0.17	U	0.00655	U	0.95	U	0.13	U	1.07	U
TO-15	Trichloroethene	0.38	U	0.0146	U	2.14	U	0.29	U	2.40	U
TO-15	Bromodichloromethane	0.17	U	0.00655	U	0.96	U	0.13	U	1.07	U
TO-15	Methyl Isobutyl Ketone	0.19	U	0.00732	U	<b>7.56</b>		0.15	U	1.24	U
TO-15	cis-1,3-Dichloropropene	0.33	U	0.0127	U	1.86	U	0.25	U	2.09	U
TO-15	Toluene	0.26	U	0.0100	U	7.00	J	0.24	J	<b>88.19</b>	
TO-15	trans-1,3-Dichloropropene	0.32	U	0.0123	U	1.83	U	0.24	U	2.05	U
TO-15	1,1,2-Trichloroethane	0.38	U	0.0146	U	2.15	U	0.29	U	2.41	U
TO-15	2-Hexanone	0.18	U	0.00693	U	<b>39.53</b>		0.14	J	<b>47.90</b>	
TO-15	1,3-Dichloropropane	0.19	U	0.00732	U	1.08	U	0.14	U	1.21	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	1.21	U	0.16	U	1.36	U
TO-15	1,2-Dibromoethane	0.54	U	0.0208	U	3.09	U	0.41	U	3.47	U
TO-15	Tetrachloroethene	0.47	U	0.0181	U	2.68	U	0.36	U	3.00	U
TO-15	Chlorobenzene	0.32	U	0.0123	U	1.82	U	0.24	U	2.04	U
TO-15	1,1,1,2-Tetrachloroethane	0.18	U	0.00693	U	1.01	U	0.13	U	1.13	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4C		SF-4C		STA-4C-5		STA-4C-5B		STA-4C-10	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.31	U	0.0119	U	1.75	U	0.23	U	2.99	J
TO-15	m & p-Xylene	0.61	U	0.0235	U	4.40	J	0.46	U	7.10	J
TO-15	Styrene	0.30	U	0.0116	U	1.70	U	0.23	U	1.90	U
TO-15	Bromoform	0.17	U	0.00655	U	0.99	U	0.13	U	1.11	U
TO-15	o-Xylene	0.30	U	0.0116	U	2.02	J	0.23	U	2.46	J
TO-15	1,1,2,2-Tetrachloroethane	0.48	U	0.0185	U	2.71	U	0.36	U	3.04	U
TO-15	1,2,3-Trichloropropane	0.19	U	0.00732	U	1.06	U	0.14	U	1.18	U
TO-15	n-Propylbenzene	0.23	U	0.00886	U	1.31	U	0.18	U	1.47	U
TO-15	Isopropylbenzene	0.23	U	0.00886	U	1.33	U	0.18	U	1.49	U
TO-15	1,3,5-Trimethylbenzene	0.36	U	0.0139	U	2.02	U	0.27	U	2.26	U
TO-15	tert-butyl benzene	0.23	U	0.00886	U	1.30	U	0.17	U	1.45	U
TO-15	1,2,4-Trimethylbenzene	0.34	U	0.0131	U	2.15	J	0.28	J	2.17	U
TO-15	sec-butylbenzene	0.24	U	0.00924	U	1.38	U	0.18	U	1.55	U
TO-15	1,3-Dichlorobenzene	0.42	U	0.0162	U	2.37	U	0.32	U	2.66	U
TO-15	Isopropyltoluene	0.24	U	0.00924	U	1.36	U	0.18	U	1.52	U
TO-15	Benzyl chloride	0.41	U	0.0158	U	2.36	U	0.31	U	2.64	U
TO-15	1,4-Dichlorobenzene	0.84	U	0.0323	U	4.75	U	0.63	U	5.32	U
TO-15	n-Butylbenzene	0.45	U	0.0173	U	2.55	U	0.34	U	2.86	U
TO-15	1,2-Dichlorobenzene	0.82	U	0.0316	U	14.07	J	0.62	U	5.21	U
TO-15	1,2-Dibromo-3-chloropropane	2.21	U	0.0851	U	12.54	U	1.67	U	14.04	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.04	U	0.0400	U	5.92	U	0.79	U	6.63	U
TO-15	Hexachlorobutadiene	1.50	U	0.0578	U	8.51	U	1.13	U	9.53	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CR		SF-4CR		STA-4CR-5		STA-4CR-10		SF-4CRD	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
ASTM 1946	% Helium Trace Gas	NA		NA		0.023	J	0.560		NA	
TO-15 SIM	<b>1,1,2,2-Tetrachloroethane</b>	0.047	U	0.00181	U	0.320	U	1.683	J	0.047	U
TO-15 SIM	<b>1,3-Dichlorobenzene</b>	0.041	U	0.00158	U	0.280	U	0.671	J	0.041	U
TO-15 SIM	<b>Benzyl chloride</b>	0.019	U	0.000732	U	0.132	U	1.200	J	0.019	U
TO-15 SIM	<b>1,4-Dichlorobenzene</b>	0.044	J	0.00169	J	0.280	U	0.515	J	0.041	U
TO-15 SIM	<b>1,2-Dichlorobenzene</b>	0.041	J	0.00158	J	0.275	U	0.912	J	0.040	U
TO-15 SIM	<b>Hexachlorobutadiene</b>	0.073	U	0.00281	U	0.502	U	1.724	J	0.074	U
TO-15 SIM	<b>Naphthalene</b>	0.095	J	0.00366	J	0.801	J	<b>3.001</b>		0.079	U
TO-15 SIM	<b>1,2,3-Trichloropropane</b>	0.036	U	0.00139	U	0.250	U	2.924	J	0.037	U
TO-15 SIM	<b>Vinyl chloride</b>	0.018	U	0.000693	U	0.121	U	0.160	U	0.018	U
TO-15 SIM	<b>Dichloromethane</b>	0.024	U	0.00092	U	0.403	J	<b>1.692</b>		0.024	U
TO-15 SIM	<b>Chloroform</b>	<b>0.191</b>		<b>0.00735</b>		<b>43.537</b>	E	<b>246.687</b>	E	<b>0.208</b>	
TO-15 SIM	<b>1,2-Dichloroethane</b>	0.028	U	0.00108	U	0.191	U	0.251	U	0.028	U
TO-15 SIM	<b>Benzene</b>	<b>0.202</b>		<b>0.00778</b>		<b>1.227</b>		<b>7.347</b>		<b>0.201</b>	
TO-15 SIM	<b>Carbon tetrachloride</b>	0.043	U	0.00166	U	<b>2.392</b>		<b>6.359</b>		0.043	U
TO-15 SIM	<b>1,2-Dichloropropane</b>	0.032	U	0.00123	U	0.217	U	0.286	U	0.032	U
TO-15 SIM	<b>Trichloroethylene</b>	0.037	U	0.00142	U	0.289	J	0.333	U	0.037	U
TO-15 SIM	<b>Bromodichloromethane</b>	0.017	U	0.000655	U	0.113	U	0.333	J	0.017	U
TO-15 SIM	<b>1,2-Dibromoethane</b>	0.053	U	0.00204	U	0.365	U	0.481	U	0.054	U
TO-15 SIM	<b>1,1,2-Trichloroethane</b>	0.037	U	0.00142	U	0.254	U	0.335	U	0.037	U
TO-15 SIM	<b>Tetrachloroethene</b>	0.046	U	0.00177	U	0.773	J	1.239	J	0.046	U
TO-15 SIM	<b>Dibromochloromethane</b>	0.042	U	0.00162	U	0.286	U	0.377	U	0.042	U
TO-15 SIM	<b>1,2-Dibromo-3-chloropropane</b>	0.124	J	0.00477	J	1.484	J	<b>17.285</b>		0.101	J
		ug/m3		ug/m2,min-1		ug/m3		ug/m3		ug/m3	
ASTM 1946	% Helium Trace Gas	NA		NA		0.023	J	0.560		NA	
TO-15	<b>Dichlorodifluoromethane</b>	0.35	U	0.0135	U	3.12	J	3.12	U	0.35	U
TO-15	<b>Chloromethane</b>	0.26	J	0.0100	J	1.91	J	1.27	U	0.17	J
TO-15	<b>Vinyl chloride</b>	0.18	U	0.00693	U	1.21	U	1.60	U	0.18	U
TO-15	<b>Bromomethane</b>	0.27	U	0.0104	U	1.84	U	2.43	U	0.27	U
TO-15	<b>Chloroethane</b>	0.18	U	0.00693	U	1.37	J	1.65	U	0.18	U
TO-15	<b>Ethanol</b>	<b>2.55</b>		<b>0.098</b>		14.65	J	3.90	U	<b>4.04</b>	
TO-15	<b>Trichlorofluoromethane</b>	0.39	U	0.0150	U	2.67	U	3.52	U	0.39	U
TO-15	<b>Acetonitrile</b>	0.23	U	0.00886	U	1.57	U	2.06	U	0.23	U
TO-15	<b>Acetone</b>	<b>8.77</b>		<b>0.338</b>		<b>253.32</b>		<b>833.99</b>		<b>11.73</b>	
TO-15	<b>Methyl iodide</b>	0.12	U	0.00462	U	0.80	U	1.22	J	0.12	U
TO-15	<b>1,1-Dichloroethene</b>	0.27	U	0.0104	U	1.83	U	2.41	U	0.27	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CR		SF-4CR		STA-4CR-5		STA-4CR-10		SF-4CRD	
		ug/m3	ug/m3	ug/m2,min-1	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
TO-15	Freon 113	0.52	U	0.0200	U	3.57	U	4.70	U	0.52	U
TO-15	Dichloromethane	0.24	U	0.00924	U	1.65	U	2.17	U	0.24	U
TO-15	Carbon disulfide	0.46	J	<b>0.018</b>		1.23	J	1.83	J	0.40	J
TO-15	trans-1,2-Dichloroethene	0.18	U	0.00693	U	1.20	U	1.58	U	0.18	U
TO-15	Methyl tert butyl ether	0.16	U	0.0062	U	1.12	U	1.47	U	0.16	U
TO-15	1,1-Dichloroethane	0.27	U	0.0104	U	1.87	U	2.46	U	0.27	U
TO-15	Vinyl acetate	0.19	U	0.00732	U	1.30	U	1.71	U	0.19	U
TO-15	2-Butanone	<b>3.50</b>		<b>0.135</b>		<b>109.64</b>		<b>294.64</b>		<b>3.33</b>	
TO-15	Bromochloromethane	0.17	U		U	1.18	U	1.56	U	0.17	U
TO-15	Isobutyl alcohol	0.15	U	0.00578	U	1.05	U	1.39	U	0.15	U
TO-15	cis-1,2-Dichloroethene	0.27	U	0.0104	U	1.87	U	2.46	U	0.27	U
TO-15	2,2-Dichloropropane	0.25	U	0.0096	U	1.73	U	2.28	U	0.25	U
TO-15	Chloroform	0.33	U	0.0127	U	<b>146.62</b>		<b>184.85</b>		0.33	U
TO-15	1,1,1-Trichloroethane	0.37	U	0.0142	U	2.54	U	3.35	U	0.37	U
TO-15	1,2-Dichloroethane	0.28	U	0.0108	U	1.91	U	2.51	U	0.28	U
TO-15	1,1-Dichloropropene	0.18	U	0.00693	U	1.26	U	1.65	U	0.18	U
TO-15	Benzene	0.28	J	0.0108	J	3.97	J	5.02	J	0.27	J
TO-15	Carbon tetrachloride	0.43	U	0.0166	U	3.87	J	3.86	U	0.43	U
TO-15	n-Heptane	0.15	U	0.00578	U	<b>6.04</b>		<b>10.65</b>		0.15	U
TO-15	1,2-Dichloropropane	0.32	U	0.0123	U	2.17	U	2.86	U	0.32	U
TO-15	1,4 Dioxane	0.45	U	0.0173	U	3.10	U	4.07	U	0.45	U
TO-15	Dibromomethane	0.16	U	0.00616	U	1.12	U	1.48	U	0.17	U
TO-15	Trichloroethene	0.37	U	0.0142	U	2.53	U	3.33	U	0.37	U
TO-15	Bromodichloromethane	0.17	U	0.00655	U	1.13	U	1.49	U	0.17	U
TO-15	Methyl Isobutyl Ketone	0.19	U	0.00732	U	1.31	J	1.72	U	0.19	U
TO-15	cis-1,3-Dichloropropene	0.32	U	0.0123	U	2.20	U	2.89	U	0.32	U
TO-15	Toluene	0.26	U	0.0100	U	<b>10.65</b>		6.51	J	0.26	U
TO-15	trans-1,3-Dichloropropene	0.31	U	0.0119	U	2.16	U	2.84	U	0.32	U
TO-15	1,1,2-Trichloroethane	0.37	U	0.0142	U	2.54	U	3.35	U	0.37	U
TO-15	2-Hexanone	0.18	U	0.00693	U	<b>26.83</b>		<b>49.90</b>		0.18	U
TO-15	1,3-Dichloropropane	0.19	U	0.00732	U	1.28	U	1.68	U	0.19	U
TO-15	Dibromochloromethane	0.21	U	0.00809	U	1.43	U	1.88	U	0.21	U
TO-15	1,2-Dibromoethane	0.53	U	0.0204	U	3.65	U	4.81	U	0.54	U
TO-15	Tetrachloroethene	0.46	U	0.0177	U	3.16	U	4.16	U	0.46	U
TO-15	Chlorobenzene	0.31	U	0.0119	U	2.15	U	2.83	U	0.32	U
TO-15	1,1,1,2-Tetrachloroethane	0.17	U	0.00655	U	1.19	U	1.57	U	0.18	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CR		SF-4CR		STA-4CR-5		STA-4CR-10		SF-4CRD	
		ug/m3		ug/m <sup>2</sup> ,min-1		ug/m3		ug/m3		ug/m3	
TO-15	Ethylbenzene	0.30	U	0.0116	U	2.59	J	2.72	U	0.30	U
TO-15	m & p-Xylene	0.60	U	0.0231	U	19.87	J	5.38	U	0.60	U
TO-15	Styrene	0.29	U	0.0112	U	2.01	U	2.64	U	0.29	U
TO-15	Bromoform	0.17	U	0.00655	U	1.17	U	1.54	U	0.17	U
TO-15	o-Xylene	0.30	U	0.0116	U	9.14	J	2.66	U	0.30	U
TO-15	1,1,2,2-Tetrachloroethane	0.47	U	0.0181	U	3.20	U	4.21	U	0.47	U
TO-15	1,2,3-Trichloropropane	0.18	U	0.00693	U	1.25	U	1.64	U	0.18	U
TO-15	n-Propylbenzene	0.23	U	0.00886	U	1.77	J	2.04	U	0.23	U
TO-15	Isopropylbenzene	0.23	U	0.00886	U	14.65		2.07	U	0.23	U
TO-15	1,3,5-Trimethylbenzene	0.35	U	0.0135	U	5.34	J	3.13	U	0.35	U
TO-15	tert-butyl benzene	0.22	U	0.00847	U	2.72	J	2.01	U	0.22	U
TO-15	1,2,4-Trimethylbenzene	0.33	U	0.0127	U	17.05		3.02	U	0.34	U
TO-15	sec-butylbenzene	0.24	U	0.00924	U	1.63	U	2.15	U	0.24	U
TO-15	1,3-Dichlorobenzene	0.41	U	0.0158	U	2.80	U	3.69	U	0.41	U
TO-15	Isopropyltoluene	0.23	U	0.00886	U	1.60	U	2.11	U	0.24	U
TO-15	Benzyl chloride	0.41	U	0.0158	U	2.78	U	3.66	U	0.41	U
TO-15	1,4-Dichlorobenzene	0.82	U	0.0316	U	5.60	U	7.38	U	0.82	U
TO-15	n-Butylbenzene	0.44	U	0.0169	U	3.01	U	3.96	U	0.44	U
TO-15	1,2-Dichlorobenzene	0.80	U	0.0308	U	5.49	U	7.23	U	0.81	U
TO-15	1,2-Dibromo-3-chloropropane	2.16	U	0.0832	U	14.79	U	19.47	U	2.17	U
TO-15 SIM	1,2,4-Trichlorobenzene	1.02	U	0.0393	U	6.98	U	9.19	U	1.03	U
TO-15	Hexachlorobutadiene	1.46	U	0.0562	U	10.04	U	13.22	U	1.47	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CRD	STA-4C-5-DUP	STA-4C-10-DUP
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	NA	0.028	J 0.595
TO-15 SIM	1,1,2,2-Tetrachloroethane	0.00181	U 0.311	U 1.499 J
TO-15 SIM	1,3-Dichlorobenzene	0.00158	U 0.272	U 0.479 J
TO-15 SIM	Benzyl chloride	0.000732	U 0.128	U 0.178 U
TO-15 SIM	1,4-Dichlorobenzene	0.00158	U 0.272	U 0.450 J
TO-15 SIM	1,2-Dichlorobenzene	0.00154	U 0.267	U 0.780 J
TO-15 SIM	Hexachlorobutadiene	0.00285	U 0.488	U 2.978 J
TO-15 SIM	Naphthalene	0.00304	U 0.521	U 9.276
TO-15 SIM	1,2,3-Trichloropropane	0.00142	U 0.243	U 2.638 J
TO-15 SIM	Vinyl chloride	0.000693	U 0.118	U 0.163 U
TO-15 SIM	Dichloromethane	0.00092	U 0.528	J 1.471
TO-15 SIM	Chloroform	0.00801	147.947	E 225.465 E
TO-15 SIM	1,2-Dichloroethane	0.00108	U 0.185	U 0.256 U
TO-15 SIM	Benzene	0.00774	2.469	7.277
TO-15 SIM	Carbon tetrachloride	0.00166	U 4.548	6.120
TO-15 SIM	1,2-Dichloropropane	0.00123	U 0.211	U 0.292 U
TO-15 SIM	Trichloroethene	0.00142	U 0.246	U 0.340 U
TO-15 SIM	Bromodichloromethane	0.000655	U 0.110	U 0.152 U
TO-15 SIM	1,2-Dibromoethane	0.00208	U 0.355	U 0.491 U
TO-15 SIM	1,1,2-Trichloroethane	0.00142	U 0.247	U 0.342 U
TO-15 SIM	Tetrachloroethene	0.00177	U 1.014	J 1.127 J
TO-15 SIM	Dibromochloromethane	0.00162	U 0.278	U 0.385 U
TO-15 SIM	1,2-Dibromo-3-chloropropane	0.00389	J 0.772	J 18.103
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>
ASTM 1946	% Helium Trace Gas	NA	0.028	J 0.595
TO-15	Dichlorodifluoromethane	0.0135	U 2.31	U 3.19 U
TO-15	Chloromethane	0.0065	J 0.94	U 4.58 J
TO-15	Vinyl chloride	0.00693	U 1.18	U 1.63 U
TO-15	Bromomethane	0.0104	U 1.79	U 2.48 U
TO-15	Chloroethane	0.00693	U 1.22	U 1.69 U
TO-15	Ethanol	0.156	2.88	U 3.98 U
TO-15	Trichlorofluoromethane	0.0150	U 2.59	U 3.59 U
TO-15	Acetonitrile	0.00886	U 1.52	U 2.11 U
TO-15	Acetone	0.452	234.72	155.28
TO-15	Methyl iodide	0.00462	U 0.78	U 1.08 U
TO-15	1,1-Dichloroethene	0.0104	U 1.78	U 2.46 U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CRD	STA-4C-5-DUP	STA-4C-10-DUP	
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	
TO-15	Freon 113	0.0200	U 3.47	U 4.80	U
TO-15	Dichloromethane	0.00924	U 1.60	U 2.22	U
TO-15	Carbon disulfide	0.015	J 1.18	U 4.12	J
TO-15	trans-1,2-Dichloroethene	0.00693	U 1.17	U 1.62	U
TO-15	Methyl tert butyl ether	0.0062	U 1.09	U 1.50	U
TO-15	1,1-Dichloroethane	0.0104	U 1.82	U 2.51	U
TO-15	Vinyl acetate	0.00732	U 1.26	U 1.75	U
TO-15	2-Butanone	0.128	101.86	32.64	
TO-15	Bromochloromethane	0.00655	U 1.15	U 1.59	U
TO-15	Isobutyl alcohol	0.00578	U 1.02	U 1.42	U
TO-15	cis-1,2-Dichloroethene	0.0104	U 1.81	U 2.51	U
TO-15	2,2-Dichloropropane	0.0096	U 1.68	U 2.33	U
TO-15	Chloroform	0.0127	U 153.94	213.93	
TO-15	1,1,1-Trichloroethane	0.0142	U 2.47	U 3.42	U
TO-15	1,2-Dichloroethane	0.0108	U 1.85	U 2.56	U
TO-15	1,1-Dichloropropene	0.00693	U 1.22	U 1.69	U
TO-15	Benzene	0.0104	J 3.07	J 5.58	J
TO-15	Carbon tetrachloride	0.0166	U 3.89	J 4.27	J
TO-15	n-Heptane	0.00578	U 5.70	7.97	
TO-15	1,2-Dichloropropane	0.0123	U 2.11	U 2.92	U
TO-15	1,4 Dioxane	0.0173	U 3.01	U 4.16	U
TO-15	Dibromomethane	0.00655	U 1.09	U 1.51	U
TO-15	Trichloroethene	0.0142	U 2.46	U 3.40	U
TO-15	Bromodichloromethane	0.00655	U 1.10	U 1.52	U
TO-15	Methyl Isobutyl Ketone	0.00732	U 1.27	U 1.75	U
TO-15	cis-1,3-Dichloropropene	0.0123	U 2.14	U 2.96	U
TO-15	Toluene	0.0100	U 2.24	J 5.24	J
TO-15	trans-1,3-Dichloropropene	0.0123	U 2.10	U 2.90	U
TO-15	1,1,2-Trichloroethane	0.0142	U 2.47	U 3.42	U
TO-15	2-Hexanone	0.00693	U 33.62	1.64	U
TO-15	1,3-Dichloropropane	0.00732	U 1.24	U 1.72	U
TO-15	Dibromochloromethane	0.00809	U 1.39	U 1.92	U
TO-15	1,2-Dibromoethane	0.0208	U 3.55	U 4.91	U
TO-15	Tetrachloroethene	0.0177	U 3.07	U 4.25	U
TO-15	Chlorobenzene	0.0123	U 2.09	U 2.89	U
TO-15	1,1,1,2-Tetrachloroethane	0.00693	U 1.16	U 1.61	U

Table 3-4C. Summary Data for Station 4 Center Location.

METHOD	COMPOUND	SF-4CRD	STA-4C-5-DUP	STA-4C-10-DUP	
		ug/m <sup>2</sup> ,min-1	ug/m <sup>3</sup>	ug/m <sup>3</sup>	
TO-15	Ethylbenzene	0.0116	U 2.01	U 2.78	U
TO-15	m & p-Xylene	0.0231	U 3.97	U 5.50	U
TO-15	Styrene	0.0112	U 1.95	U 2.70	U
TO-15	Bromoform	0.00655	U 1.13	U 1.57	U
TO-15	o-Xylene	0.0116	U 1.97	U 2.72	U
TO-15	1,1,2,2-Tetrachloroethane	0.0181	U 3.11	U 4.30	U
TO-15	1,2,3-Trichloropropane	0.00693	U 1.21	U 1.68	U
TO-15	n-Propylbenzene	0.00886	U 1.51	U 2.08	U
TO-15	Isopropylbenzene	0.00886	U 1.53	U 2.11	U
TO-15	1,3,5-Trimethylbenzene	0.0135	U 2.31	U 3.20	U
TO-15	tert-butyl benzene	0.00847	U 1.49	U 2.06	U
TO-15	1,2,4-Trimethylbenzene	0.0131	U 2.23	U 3.08	U
TO-15	sec-butylbenzene	0.00924	U 1.58	U 2.19	U
TO-15	1,3-Dichlorobenzene	0.0158	U 2.72	U 3.77	U
TO-15	Isopropyltoluene	0.00924	U 1.56	U 2.16	U
TO-15	Benzyl chloride	0.0158	U 2.70	U 3.74	U
TO-15	1,4-Dichlorobenzene	0.0316	U 5.45	U 7.53	U
TO-15	n-Butylbenzene	0.0169	U 2.92	U 4.05	U
TO-15	1,2-Dichlorobenzene	0.0312	U 5.34	U 7.39	U
TO-15	1,2-Dibromo-3-chloropropane	0.0835	U 14.37	U 19.89	U
TO-15 SIM	1,2,4-Trichlorobenzene	0.0397	U 6.79	U 9.39	U
TO-15	Hexachlorobutadiene	0.0566	U 9.76	U 13.50	U

Summary of Lab Blank Data for SIM Analysis.

## Method Blanks

### SDG 210070 and 210071

#### SIM

	210070		210070		210070		210070		210070		210070		210071	
Compound	Amount ug/m3	Flag	ug/m3	Flag										
Vinyl chloride	0.036	U	0.036	U	0.181	U	0.181	U	0.181	U	0.036	U	0.036	U
Dichloromethane	0.032	U	0.032	U	0.158	U	0.158	U	0.158	U	0.032	U	0.032	U
Chloroform	0.015	U	0.015	U	0.075	U	0.075	U	0.075	U	0.015	U	0.015	U
1,2-Dichloroethane	0.032	U	0.032	U	0.158	U	0.158	U	0.158	U	0.032	U	0.032	U
Benzene	0.031	U	0.031	U	0.155	U	0.155	U	0.155	U	0.031	U	0.031	U
Carbon tetrachloride	0.057	U	0.057	U	0.284	U	0.284	U	0.284	U	0.057	U	0.057	U
1,2-Dichloropropane	0.061	U	<b>0.074</b>	J	<b>0.361</b>	J	0.303	U	0.303	U	<b>0.074</b>	J		
Trichloroethene	0.028	U	0.028	U	0.141	U	0.141	U	0.141	U	0.028	U	0.028	U
Bromodichloromethane	0.014	U	0.014	U	0.069	U	0.069	U	0.069	U	0.014	U	0.014	U
1,2-Dibromoethane	0.019	U	0.019	U	0.093	U	0.093	U	0.093	U	0.019	U	0.019	U
1,1,2-Trichloroethane	0.026	U	0.026	U	0.129	U	0.129	U	0.129	U	0.026	U	0.026	U
Tetrachloroethene	0.022	U	0.022	U	0.108	U	0.108	U	0.108	U	0.022	U	0.022	U
Dibromochloromethane	<b>0.068</b>	J	<b>0.074</b>	J	<b>0.218</b>	J	<b>0.176</b>	J	<b>0.189</b>	J	<b>0.074</b>	J		
1,2,3-Trichloropropane	0.033	U	0.033	U	0.166	U	0.166	U	0.166	U	0.033	U	0.033	U
1,1,2,2-Tetrachloroethane	0.025	U	0.025	U	0.123	U	0.123	U	0.123	U	0.025	U	0.025	U
1,2-Dibromo-3-chloropropane	0.029	U	0.029	U	0.143	U	0.143	U	0.143	U	0.029	U	0.029	U
1,3-Dichlorobenzene	0.013	U	0.013	U	0.064	U	0.064	U	0.064	U	0.013	U	0.013	U
Benzyl chloride	0.041	U	0.041	U	0.206	U	0.206	U	0.206	U	0.041	U	0.041	U
1,4-Dichlorobenzene	0.029	U	0.029	U	0.144	U	0.144	U	0.144	U	0.029	U	0.029	U
1,2-Dichlorobenzene	0.036	U	0.036	U	0.179	U	0.179	U	0.179	U	0.036	U	0.036	U
Naphthalene	0.032	U	0.032	U	0.162	U	0.162	U	0.162	U	0.032	U	0.032	U
Hexachlorobutadiene	0.067	U	<b>0.110</b>	J	<b>0.501</b>	J	0.336	U	<b>0.421</b>	J	<b>0.110</b>	J		

\*Lowest MDL with highest detection per compound

Summary of Lab Blank Data for SIM Analysis.

## Method Blanks SDG 210070 and 210071 SIM

	210071		210071		210071		210071					
Compound	Amount	Flag	Amount	Flag	Amount	Flag	Amount	Flag	*Highest	Flag	*Highest	Flag
			ug/m3		ug/m3		ug/m3		ug/m3		ug/m2,min-1	
Vinyl chloride	0.036	U	0.0014	U								
Dichloromethane	0.032	U	0.0012	U								
Chloroform	0.015	U	0.0006	U								
1,2-Dichloroethane	0.032	U	0.0012	U								
Benzene	0.031	U	0.0012	U								
Carbon tetrachloride	0.057	U	0.0022	U								
1,2-Dichloropropane	<b>0.072</b>	J	0.061	U	0.061	U	<b>0.332</b>		<b>0.332</b>		0.0128	
Trichloroethene	0.028	U	0.0011	U								
Bromodichloromethane	0.014	U	0.0005	U								
1,2-Dibromoethane	0.019	U	0.0007	U								
1,1,2-Trichloroethane	0.026	U	0.0010	U								
Tetrachloroethene	0.022	U	0.0008	U								
Dibromochloromethane	<b>0.044</b>	J	<b>0.035</b>	J	<b>0.038</b>	J	<b>0.069</b>	J	<b>0.218</b>	J	0.0084	J
1,2,3-Trichloropropane	0.033	U	0.0013	U								
1,1,2,2-Tetrachloroethane	0.025	U	0.0010	U								
1,2-Dibromo-3-chloropropane	0.029	U	0.0011	U								
1,3-Dichlorobenzene	0.013	U	0.0005	U								
Benzyl chloride	0.041	U	0.0016	U								
1,4-Dichlorobenzene	0.029	U	0.0011	U								
1,2-Dichlorobenzene	0.036	U	0.0014	U								
Naphthalene	0.032	U	0.0012	U								
Hexachlorobutadiene	<b>0.100</b>	J	0.067	U	<b>0.084</b>	J	<b>0.313</b>	J	<b>0.501</b>	J	0.0193	J

\*Lowest MDL with highest detection per compound

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

Method Blanks	210070		210070		210070		210070		210070		210070
	Amount		Amount		Amount		Amount		Amount		Amount
Compound	ug/m3	Flag	ug/m3								
Dichlorodifluoromethane	13.40	U	0.27	U	1.34	U	0.27	U	1.34	U	1.34
Chloromethane	5.44	U	0.11	U	0.54	U	0.11	U	0.54	U	0.54
Vinyl chloride	6.86	U	0.14	U	0.69	U	0.14	U	0.69	U	0.69
Bromomethane	10.42	U	0.21	U	1.04	U	0.21	U	1.04	U	1.04
Chloroethane	7.08	U	0.14	U	0.71	U	0.14	U	0.71	U	0.71
Ethanol	16.74	U	0.33	U	1.67	U	0.33	U	1.67	U	1.67
Trichlorofluoromethane	15.09	U	0.30	U	1.51	U	0.30	U	1.51	U	1.51
Acetonitrile	8.85	U	0.18	U	0.89	U	0.18	U	0.89	U	0.89
Acetone	6.94	U	0.14	U	0.69	U	0.20	J	0.69	U	0.69
Methyl iodide	4.53	U	0.09	U	0.45	U	0.09	U	0.45	U	0.45
1,1-Dichloroethene	10.33	U	0.21	U	1.03	U	0.21	U	1.03	U	1.03
Freon 113	20.17	U	0.40	U	2.02	U	0.40	U	2.02	U	2.02
Dichloromethane	9.32	U	0.19	U	0.93	U	0.19	U	0.93	U	0.93
Carbon disulfide	6.87	U	0.14	U	0.69	U	0.14	U	0.69	U	0.69
trans-1,2-Dichloroethene	6.79	U	0.14	U	0.68	U	0.14	U	0.68	U	0.68
Methyl tert butyl ether	6.32	U	0.13	U	0.63	U	0.13	U	0.63	U	0.63
1,1-Dichloroethane	10.56	U	0.21	U	1.06	U	0.21	U	1.06	U	1.06
Vinyl acetate	7.35	U	0.15	U	0.74	U	0.15	U	0.74	U	0.74
2-Butanone	7.13	U	0.14	U	0.71	U	0.14	U	0.71	U	0.71
Bromochloromethane	6.69	U	0.13	U	0.67	U	0.13	U	0.67	U	0.67
Isobutyl alcohol	5.95	U	0.12	U	0.59	U	0.12	U	0.59	U	0.59
cis-1,2-Dichloroethene	10.54	U	0.21	U	1.05	U	0.21	U	1.05	U	1.05
2,2-Dichloropropane	9.77	U	0.20	U	0.98	U	0.20	U	0.98	U	0.98
Chloroform	12.86	U	0.26	U	1.29	U	0.26	U	1.29	U	1.29
1,1,1-Trichloroethane	14.37	U	0.29	U	1.44	U	0.29	U	1.44	U	1.44
1,2-Dichloroethane	10.77	U	0.22	U	1.08	U	0.22	U	1.08	U	1.08
1,1-Dichloropropene	7.10	U	0.14	U	0.71	U	0.14	U	0.71	U	0.71
Benzene	8.49	U	0.17	U	0.85	U	0.17	U	1.01	J	1.40

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

Method Blanks	210070		210070		210070		210070		210070		210070
	Amount		Amount		Amount		Amount		Amount		Amount
Compound	ug/m3	Flag	ug/m3								
Carbon tetrachloride	16.56	U	0.33	U	1.66	U	0.33	U	1.66	U	1.66
n-Heptane	5.90	U	0.12	U	0.59	U	0.12	U	0.59	U	0.59
1,2-Dichloropropane	12.29	U	0.25	U	1.23	U	0.25	U	1.23	U	1.23
1,4 Dioxane	17.49	U	0.35	U	1.75	U	0.35	U	1.75	U	1.75
Dibromomethane	6.35	U	0.13	U	0.63	U	0.13	U	0.63	U	0.63
Trichloroethene	14.29	U	0.29	U	1.43	U	0.29	U	1.43	U	1.43
Bromodichloromethane	6.40	U	0.13	U	0.64	U	0.13	U	0.64	U	0.64
Methyl Isobutyl Ketone	7.36	U	0.15	U	0.74	U	0.15	U	0.74	U	0.74
cis-1,3-Dichloropropene	12.42	U	0.25	U	1.24	U	0.25	U	1.24	U	1.24
Toluene	10.02	U	0.20	U	1.00	U	0.20	U	1.00	U	1.00
trans-1,3-Dichloropropene	12.19	U	0.24	U	1.22	U	0.24	U	1.22	U	1.22
1,1,2-Trichloroethane	14.37	U	0.29	U	1.44	U	0.29	U	1.44	U	1.44
2-Hexanone	6.91	U	0.14	U	0.69	U	0.14	U	0.69	U	0.69
1,3-Dichloropropane	7.22	U	0.14	U	0.72	U	0.14	U	0.72	U	0.72
Dibromochloromethane	8.07	U	0.16	U	0.81	U	0.16	U	0.81	U	0.81
1,2-Dibromoethane	20.63	U	0.41	U	2.06	U	0.41	U	2.06	U	2.06
Tetrachloroethene	17.85	U	0.36	U	1.79	U	0.36	U	1.79	U	1.79
Chlorobenzene	12.13	U	0.24	U	1.21	U	0.24	U	1.21	U	1.21
1,1,1,2-Tetrachloroethane	6.75	U	0.13	U	0.67	U	0.13	U	0.67	U	0.67
Ethylbenzene	11.66	U	0.23	U	1.17	U	0.23	U	1.17	U	1.17
m & p-Xylene	23.10	U	0.46	U	2.31	U	0.46	U	2.31	U	2.31
Styrene	11.33	U	0.23	U	1.13	U	0.23	U	1.13	U	1.13
Bromoform	6.59	U	0.13	U	0.66	U	0.13	U	0.66	U	0.66
o-Xylene	11.44	U	0.23	U	1.14	U	0.23	U	1.14	U	1.14
1,1,2,2-Tetrachloroethane	18.07	U	0.36	U	1.81	U	0.36	U	1.81	U	1.81
1,2,3-Trichloropropane	7.05	U	0.14	U	0.70	U	0.14	U	0.70	U	0.70
n-Propylbenzene	8.76	U	0.18	U	0.88	U	0.18	U	0.88	U	0.88
Isopropylbenzene	8.88	U	0.18	U	0.89	U	0.18	U	0.89	U	0.89

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

Method Blanks	210070		210070		210070		210070		210070		210070
	Amount		Amount		Amount		Amount		Amount		Amount
Compound	ug/m3	Flag	ug/m3								
1,3,5-Trimethylbenzene	13.45	U	0.27	U	1.35	U	0.27	U	1.35	U	1.35
tert-butyl benzene	8.64	U	0.17	U	0.86	U	0.17	U	0.86	U	0.86
1,2,4-Trimethylbenzene	12.94	U	0.26	U	1.29	U	0.26	U	1.29	U	1.29
sec-butylbenzene	9.21	U	0.18	U	0.92	U	0.18	U	0.92	U	0.92
1,3-Dichlorobenzene	15.83	U	0.32	U	1.58	U	0.32	U	1.58	U	1.58
Isopropyltoluene	9.07	U	0.18	U	0.91	U	0.18	U	0.91	U	0.91
Benzyl chloride	15.72	U	0.31	U	1.57	U	0.31	U	1.57	U	1.57
1,4-Dichlorobenzene	31.66	U	0.63	U	3.17	U	0.63	U	3.17	U	3.17
n-Butylbenzene	17.00	U	0.34	U	1.70	U	0.34	U	1.70	U	1.70
1,2-Dichlorobenzene	31.04	U	0.62	U	3.10	U	0.62	U	3.10	U	3.10
1,2-Dibromo-3-chloropropan	83.57	U	1.67	U	8.36	U	1.67	U	8.36	U	8.36
1,2,4-Trichlorobenzene	39.45	U	0.79	U	3.95	U	0.79	U	3.95	U	3.95
Hexachlorobutadiene	56.72	U	1.13	U	5.67	U	1.13	U	5.67	U	5.67

\*Lowest MDL with highest detection per compound

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

Method Blanks		210070			210071		210071		210071		210071	
		Amount			Amount	Flag	ug/m3	Flag	ug/m3	Flag	ug/m3	Flag
Compound	Flag	ug/m3	Flag		Flag	ug/m3	Flag	ug/m3	Flag	ug/m3	Flag	ug/m3
Dichlorodifluoromethane	U	0.27	U		0.27	U	0.27	U	0.27	U	0.27	U
Chloromethane	U	0.11	U		0.11	U	0.11	U	0.11	U	0.11	U
Vinyl chloride	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
Bromomethane	U	0.21	U		0.21	U	0.21	U	0.21	U	0.21	U
Chloroethane	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
Ethanol	U	0.33	U		0.33	U	0.33	U	0.78	J	0.33	U
Trichlorofluoromethane	U	0.30	U		0.30	U	0.30	U	0.30	U	0.30	U
Acetonitrile	U	0.18	U		0.18	U	0.18	U	0.18	U	0.18	U
Acetone	U	0.14	U		0.14	U	0.18	J	0.34	J	0.62	J
Methyl iodide	U	0.09	U		0.09	U	0.09	U	0.09	U	0.09	U
1,1-Dichloroethene	U	0.21	U		0.21	U	0.21	U	0.21	U	0.21	U
Freon 113	U	0.40	U		0.40	U	0.40	U	0.40	U	0.40	U
Dichloromethane	U	0.19	U		0.19	U	0.19	U	0.19	U	0.19	U
Carbon disulfide	U	0.14	U		0.14	U	0.87		0.14	U	0.14	U
trans-1,2-Dichloroethene	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
Methyl tert butyl ether	U	0.13	U		0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	U	0.21	U		0.21	U	0.21	U	0.21	U	0.21	U
Vinyl acetate	U	0.15	U		0.15	U	0.15	U	0.15	U	0.15	U
2-Butanone	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	J
Bromochloromethane	U	0.13	U		0.13	U	0.13	U	0.13	U	0.13	U
Isobutyl alcohol	U	0.12	U		0.12	U	0.12	U	0.12	U	0.12	U
cis-1,2-Dichloroethene	U	0.21	U		0.21	U	0.21	U	0.21	U	0.21	U
2,2-Dichloropropane	U	0.20	U		0.20	U	0.20	U	0.20	U	0.20	U
Chloroform	U	0.26	U		0.26	U	0.26	U	0.26	U	0.26	U
1,1,1-Trichloroethane	U	0.29	U		0.29	U	0.29	U	0.29	U	0.29	U
1,2-Dichloroethane	U	0.22	U		0.22	U	0.22	U	0.22	U	0.22	U
1,1-Dichloropropene	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
Benzene	J	0.17	U		0.17	U	0.17	U	0.17	U	0.34	J

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

Method Blanks		210070			210071		210071		210071		210071	
		Amount			Amount	Flag	ug/m3	Flag	ug/m3	Flag	ug/m3	Flag
Compound	Flag	ug/m3	Flag		Flag	ug/m3	Flag	ug/m3	Flag	ug/m3	Flag	ug/m3
Carbon tetrachloride	U	0.33	U		0.33	U	0.33	U	0.33	U	0.33	U
n-Heptane	U	0.12	U		0.12	U	0.12	U	0.12	U	0.12	U
1,2-Dichloropropane	U	0.25	U		0.25	U	0.25	U	0.25	U	0.25	U
1,4 Dioxane	U	0.35	U		0.35	U	0.35	U	0.35	U	0.35	U
Dibromomethane	U	0.13	U		0.13	U	0.13	U	0.13	U	0.13	U
Trichloroethene	U	0.29	U		0.29	U	0.29	U	0.29	U	0.29	U
Bromodichloromethane	U	0.13	U		0.13	U	0.13	U	0.13	U	0.13	U
Methyl Isobutyl Ketone	U	0.15	U		0.15	U	0.15	U	0.15	U	0.15	U
cis-1,3-Dichloropropene	U	0.25	U		0.25	U	0.25	U	0.25	U	0.25	U
Toluene	U	0.20	U		0.20	U	0.20	U	0.20	U	0.20	U
trans-1,3-Dichloropropene	U	0.24	U		0.24	U	0.24	U	0.24	U	0.24	U
1,1,2-Trichloroethane	U	0.29	U		0.29	U	0.29	U	0.29	U	0.29	U
2-Hexanone	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
1,3-Dichloropropane	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
Dibromochloromethane	U	0.16	U		0.16	U	0.16	U	0.16	U	0.16	U
1,2-Dibromoethane	U	0.41	U		0.41	U	0.41	U	0.41	U	0.41	U
Tetrachloroethene	U	0.36	U		0.36	U	0.36	U	0.36	U	0.36	U
Chlorobenzene	U	0.24	U		0.24	U	0.24	U	0.24	U	0.24	U
1,1,2-Tetrachloroethane	U	0.13	U		0.13	U	0.13	U	0.13	U	0.13	U
Ethylbenzene	U	0.23	U		0.23	U	0.23	U	0.23	U	0.23	U
m & p-Xylene	U	0.46	U		0.46	U	0.46	U	0.46	U	0.46	U
Styrene	U	0.23	U		0.23	U	0.23	U	0.23	U	0.23	U
Bromoform	U	0.13	U		0.13	U	0.13	U	0.13	U	0.13	U
o-Xylene	U	0.23	U		0.23	U	0.23	U	0.23	U	0.23	U
1,1,2,2-Tetrachloroethane	U	0.36	U		0.36	U	0.36	U	0.36	U	0.36	U
1,2,3-Trichloropropane	U	0.14	U		0.14	U	0.14	U	0.14	U	0.14	U
n-Propylbenzene	U	0.18	U		0.18	U	0.18	U	0.18	U	0.18	U
Isopropylbenzene	U	0.18	U		0.18	U	0.18	U	0.18	U	0.18	U

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

Method Blanks		210070			210071		210071		210071		210071	
		Amount			Amount		Amount		Amount		Amount	
Compound	Flag	ug/m3	Flag		ug/m3	Flag	ug/m3	Flag	ug/m3	Flag	ug/m3	Flag
1,3,5-Trimethylbenzene	U	0.27	U		0.27	U	0.27	U	0.27	U	0.27	U
tert-butyl benzene	U	0.17	U		0.17	U	0.17	U	0.17	U	0.17	U
1,2,4-Trimethylbenzene	U	0.26	U		0.26	U	0.26	U	0.26	U	0.26	U
sec-butylbenzene	U	0.18	U		0.18	U	0.18	U	0.18	U	0.18	U
1,3-Dichlorobenzene	U	0.32	U		0.32	U	0.32	U	0.32	U	0.32	U
Isopropyltoluene	U	0.18	U		0.18	U	0.18	U	0.18	U	0.18	U
Benzyl chloride	U	0.31	U		0.31	U	0.31	U	0.31	U	0.31	U
1,4-Dichlorobenzene	U	0.63	U		0.63	U	0.63	U	0.63	U	0.63	U
n-Butylbenzene	U	0.34	U		0.34	U	0.34	U	0.34	U	0.34	U
1,2-Dichlorobenzene	U	0.62	U		0.62	U	0.62	U	0.62	U	0.62	U
1,2-Dibromo-3-chloropropan	U	1.67	U		1.67	U	1.67	U	1.67	U	1.67	U
1,2,4-Trichlorobenzene	U	0.79	U		0.79	U	0.79	U	0.79	U	0.79	U
Hexachlorobutadiene	U	1.13	U		1.13	U	1.13	U	1.13	U	1.13	U

\*Lowest MDL with highest detection per compound

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

#### Method Blanks

Compound	Compound	*Highest ug/m3		Maximum ug/m2,min-1	
Dichlorodifluoromethane	Dichlorodifluoromethane	0.27	U	0.010	U
Chloromethane	Chloromethane	0.11	U	0.0042	U
Vinyl chloride	Vinyl chloride	0.14	U	0.0054	U
Bromomethane	Bromomethane	0.21	U	0.0081	U
Chloroethane	Chloroethane	0.14	U	0.0054	U
Ethanol	Ethanol	0.33	U	0.013	U
Trichlorofluoromethane	Trichlorofluoromethane	0.30	U	0.012	U
Acetonitrile	Acetonitrile	0.18	U	0.0069	U
Acetone	Acetone	0.62	J	0.024	J
Methyl iodide	Methyl iodide	0.09	U	0.0035	U
1,1-Dichloroethene	1,1-Dichloroethene	0.21	U	0.0081	U
Freon 113	Freon 113	0.40	U	0.015	U
Dichloromethane	Dichloromethane	0.19	U	0.0073	U
Carbon disulfide	Carbon disulfide	0.87		0.033	
trans-1,2-Dichloroethene	trans-1,2-Dichloroethene	0.14	U	0.0054	U
Methyl tert butyl ether	Methyl tert butyl ether	0.13	U	0.0050	U
1,1-Dichloroethane	1,1-Dichloroethane	0.21	U	0.0081	U
Vinyl acetate	Vinyl acetate	0.15	U	0.0058	U
2-Butanone	2-Butanone	0.14	J	0.0054	J
Bromochloromethane	Bromochloromethane	0.13	U	0.0050	U
Isobutyl alcohol	Isobutyl alcohol	0.12	U	0.0046	U
cis-1,2-Dichloroethene	cis-1,2-Dichloroethene	0.21	U	0.0081	U
2,2-Dichloropropane	2,2-Dichloropropane	0.20	U	0.0077	U
Chloroform	Chloroform	0.26	U	0.010	U
1,1,1-Trichloroethane	1,1,1-Trichloroethane	0.29	U	0.011	U
1,2-Dichloroethane	1,2-Dichloroethane	0.22	U	0.0085	U
1,1-Dichloropropene	1,1-Dichloropropene	0.14	U	0.0054	U
Benzene	Benzene	0.34	J	0.013	J

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

#### Method Blanks

Compound	Compound	*Highest ug/m3		Maximum ug/m2,min-1	
Carbon tetrachloride	Carbon tetrachloride	1.40	J	0.054	J
n-Heptane	n-Heptane	0.12	U	0.0046	U
1,2-Dichloropropane	1,2-Dichloropropane	0.25	U	0.010	U
1,4 Dioxane	1,4 Dioxane	0.35	U	0.013	U
Dibromomethane	Dibromomethane	0.13	U	0.0050	U
Trichloroethene	Trichloroethene	0.29	U	0.011	U
Bromodichloromethane	Bromodichloromethane	0.13	U	0.0050	U
Methyl Isobutyl Ketone	Methyl Isobutyl Ketone	0.15	U	0.0058	U
cis-1,3-Dichloropropene	cis-1,3-Dichloropropene	0.25	U	0.010	U
Toluene	Toluene	0.20	U	0.0077	U
trans-1,3-Dichloropropene	trans-1,3-Dichloropropene	0.24	U	0.0092	U
1,1,2-Trichloroethane	1,1,2-Trichloroethane	0.29	U	0.011	U
2-Hexanone	2-Hexanone	0.14	U	0.0054	U
1,3-Dichloropropane	1,3-Dichloropropane	0.14	U	0.0054	U
Dibromochloromethane	Dibromochloromethane	0.16	U	0.0062	U
1,2-Dibromoethane	1,2-Dibromoethane	0.41	U	0.016	U
Tetrachloroethene	Tetrachloroethene	0.36	U	0.014	U
Chlorobenzene	Chlorobenzene	0.24	U	0.0092	U
1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	0.13	U	0.0050	U
Ethylbenzene	Ethylbenzene	0.23	U	0.0089	U
m & p-Xylene	m & p-Xylene	0.46	U	0.018	U
Styrene	Styrene	0.23	U	0.0089	U
Bromoform	Bromoform	0.13	U	0.0050	U
o-Xylene	o-Xylene	0.23	U	0.0089	U
1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	0.36	U	0.014	U
1,2,3-Trichloropropane	1,2,3-Trichloropropane	0.14	U	0.0054	U
n-Propylbenzene	n-Propylbenzene	0.18	U	0.0069	U
Isopropylbenzene	Isopropylbenzene	0.18	U	0.0069	U

Summary of Lab Blank Data for Full Scan Mode Analysis.

## Method Blanks

### SDG 210070 and 210071

#### Full Scan

#### Method Blanks

Compound	Compound	*Highest ug/m3		Maximum ug/m2,min-1	
1,3,5-Trimethylbenzene	1,3,5-Trimethylbenzene	0.27	U	0.010	U
tert-butyl benzene	tert-butyl benzene	0.17	U	0.0065	U
1,2,4-Trimethylbenzene	1,2,4-Trimethylbenzene	0.26	U	0.010	U
sec-butylbenzene	sec-butylbenzene	0.18	U	0.0069	U
1,3-Dichlorobenzene	1,3-Dichlorobenzene	0.32	U	0.012	U
Isopropyltoluene	Isopropyltoluene	0.18	U	0.0069	U
Benzyl chloride	Benzyl chloride	0.31	U	0.012	U
1,4-Dichlorobenzene	1,4-Dichlorobenzene	0.63	U	0.024	U
n-Butylbenzene	n-Butylbenzene	0.34	U	0.013	U
1,2-Dichlorobenzene	1,2-Dichlorobenzene	0.62	U	0.024	U
1,2-Dibromo-3-chloropropan	1,2-Dibromo-3-chloropropan	1.67	U	0.064	U
1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene	0.79	U	0.030	U
Hexachlorobutadiene	Hexachlorobutadiene	1.13	U	0.044	U

\*Lowest MDL with highest detection per compound

Summary of Helium Data.

DATE	TYPE	SAMPLE ID	DEPTH (Feet BLS)	HELIUM (%)	CRITERIA	PASS/FAIL
2/17/2010	Soil Gas	STA-3C-5	5	26.7	<3%	Fail
2/18/2010	Soil Gas	STA-3C-5-Rep	5	5.98	<3%	Fail
2/18/2010	Soil Gas	STA-3C-5-DUP	5	8.12	<3%	Fail
2/17/2010	Soil Gas	STA-3C-10	10	41.8	<3%	Fail
2/18/2010	Soil Gas	STA-3C-10-REP	10	31.4	<3%	Fail
2/18/2010	Soil Gas	STA-3C-10-DUP	10	26.9	<3%	Fail
2/17/2010	Soil Gas	STA-3S-5	5	1.21	<3%	Pass
2/17/2010	Soil Gas	STA-3S-10	10	0.076	<3%	Pass
2/17/2010	Soil Gas	STA-3W-5	5	6.89	<3%	Fail
2/17/2010	Soil Gas	STA-3W-10	10	10.2	<3%	Fail
2/18/2010	Soil Gas	STA-3N-5	5	0.040	<3%	Pass
2/18/2010	Soil Gas	STA-3N-10	10	1.46	<3%	Pass
2/18/2010	Soil Gas	STA-3E-5	5	3.15	<3%	Fail
2/18/2010	Soil Gas	STA-3E-10	10	8.68	<3%	Fail
2/18/2010	Soil Gas	STA-3C-BLANK	NA	0.020	<3%	NA
2/18/2010	Soil Gas	STA-4C-BLANK	NA	0.020	<3%	NA
2/19/2010	Soil Gas	STA-4E-5	5	0.022	<3%	Pass
2/19/2010	Soil Gas	STA-4E-10	10	0.020	<3%	Pass
2/19/2010	Soil Gas	STA-4N-5	5	0.528	<3%	Pass
2/19/2010	Soil Gas	STA-4N-10	10	0.027	<3%	Pass
2/19/2010	Soil Gas	STA-4C-5	5	0.020	<3%	Pass
2/19/2010	Soil Gas	STA-4C-5B	5	0.020	<3%	Pass
2/19/2010	Soil Gas	STA-4C-5-DUP	5	0.028	<3%	Pass
2/19/2010	Soil Gas	STA-4C-10	10	0.046	<3%	Pass
2/19/2010	Soil Gas	STA-4C-5-REP	10	0.023	<3%	Pass
2/19/2010	Soil Gas	STA-4C-10-REP	10	0.560	<3%	Pass
2/19/2010	Soil Gas	STA-4C-10-DUP	10	0.595	<3%	Pass
2/19/2010	Soil Gas	STA-4W-5	5	0.126	<3%	Pass
2/19/2010	Soil Gas	STA-4W-10	10	32.0	<3%	Fail
2/19/2010	Soil Gas	STA-4S-5	5	0.178	<3%	Pass
2/19/2010	Soil Gas	STA-4S-10	10	0.020	<3%	Pass

NA- Not Applicable.

*CE Schmidt, Ph.D.  
Environmental Consultant*

ATTACHMENT A

EMISSION MEASUREMENT DATA SHEETS

# SURFACE FLUX MEASUREMENT DATA FORM

#3  
SFATEN

DATE 2/17/2010 SAMPLERS 175, 178

LOCATION 31st St. & S. St., SF-35

SURFACE DESCRIPTION dry sand, damp from previous rain

CURRENT ACTIVITY construction site slightly change than surrounding

INSTRUMENT TYPE A I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_

INSTRUMENT BASELINE VA

PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS VA

CHAMBER I.D. 6 PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_

CHAMBER SEAL 7 CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_

AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', \_\_\_\_\_ mph Wind at Seal, \_\_\_\_\_ mph

TEMP \_\_\_\_\_ RAIN: Yes  No  Comment No rain in past week

PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None

SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used

SWEEP AIR VHP CC 50635 SUPPLIER N PSIG START 1400 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments				
			Chamber		Ambient									
			Surf	Air	Surf	Air								
0745	6.0	0												
0751		1												
0757		2												
0803		3												
0809		4	53	53	51	52								
0815	V	5								SF-35 Unit 184				
0821	Start													

## COMMENTS:

## SITE DIAGRAM

Chamber 1 w/ ZnCl6 flag

Chamber 2 w/ ZnCl6 flag

Chamber 3 w/ ZnCl6 flag

Chamber 4 w/ ZnCl6 flag

Chamber 5 w/ ZnCl6 flag

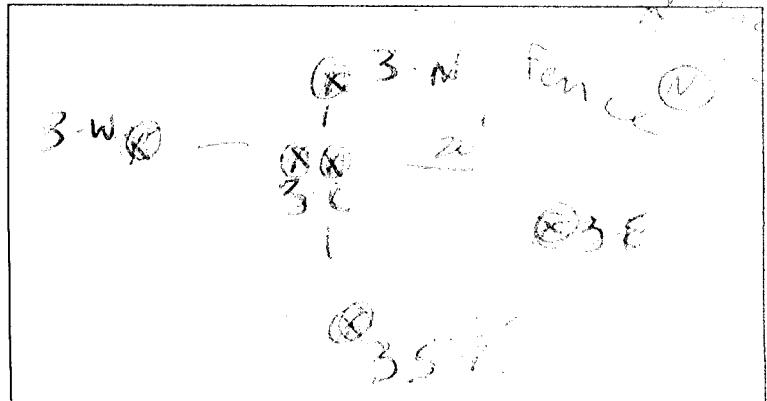
Chamber 6 w/ ZnCl6 flag

Chamber 7 w/ ZnCl6 flag

Chamber 8 w/ ZnCl6 flag

Chamber 9 w/ ZnCl6 flag

Chamber 10 w/ ZnCl6 flag



# SURFACE FLUX MEASUREMENT DATA FORM

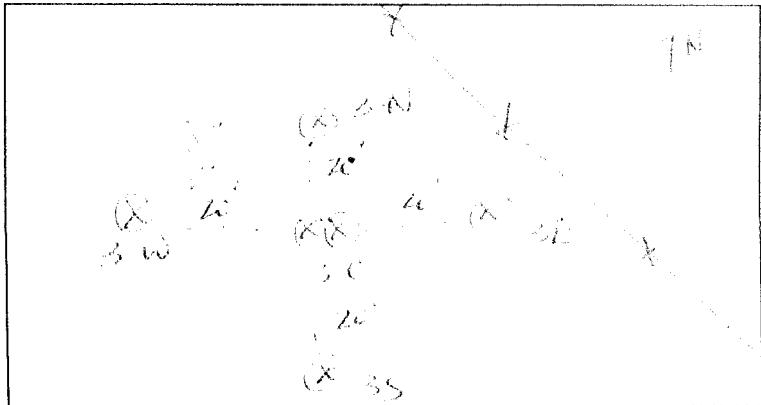
STATION  
#3

DATE 2/17/2010 SAMPLERS QES/KTS  
 LOCATION STATION #3 SW - SSW - SW  
 SURFACE DESCRIPTION GRANITE DUMP FROM prior RAINS  
 CURRENT ACTIVITY PICKED DRYER MICRO Location - 2' FROM STATION  
 INSTRUMENT TYPE NA I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE NA  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS NA  
 CHAMBER I.D. B PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL Y CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 0-2 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment No RAIN w/ Full Wk  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR 0.18 CC 50655 SUPPLIER SM PSIG START 1900 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)	Sample Number	Comments			
			Chamber		Ambient							
			Surf	Air	Surf	Air						
0748	0.18	0										
0751		1										
0757		2										
0803		3										
0804		4	53	53	50	53						
0813	0.18	5							SE-SW Can # 407			
0816	Start											

COMMENTS: NO Wk, 20° N/S/CW / Down gradient weather SITE DIAGRAM

Project 403 min  
SW - SSW - SW  
20° N/S/CW  
Down gradient weather  
Chamber 7.5' W. of flag  
SW - SSW - SW



MB  
S700W  
#3

## SURFACE FLUX MEASUREMENT DATA FORM

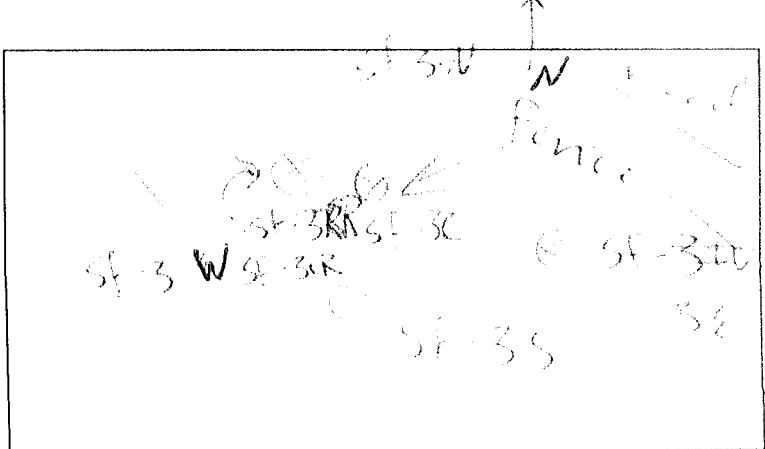
DATE 7/17/10 SAMPLERS CRS, KTS  
 LOCATION station 43-C, 57-3C  
 SURFACE DESCRIPTION sand soil, damp from previous rains  
 CURRENT ACTIVITY no activity, this measurement is still reliable  
 INSTRUMENT TYPE V.A. I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE V.A.  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS 0.1  
 CHAMBER I.D. 5 PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL Y CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 6 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment no rain in past week  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR 50P CC 50635 SUPPLIER V.A. PSIG START 1/00 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		VA					
			Surf	Air	Surf	Air						
0836	0	0							St 36	21543		
0842		1										
0848		2										
0854		3										
0901		4										
0906	5	59	66	61	56				St 36	21543		
0916	50											

## COMMENTS:

Wind direction NNE  
 Temperature 70°F  
 Wind speed 6 mph  
 Relative humidity 61%  
 Barometric 30.03  
 Purged 7 mins.  
 Date 7/17/10 Site MB-01  
 Altitude 263' Bar 30.03

## SITE DIAGRAM



McGeehan - 702-269-5214

# SURFACE FLUX MEASUREMENT DATA FORM

SF-3CR  
#3

DATE 11/11/10 SAMPLERS CES, XTS

LOCATION Balcony S CR, SF-3CR

SURFACE DESCRIPTION Soil, ground slightly damp, few prairies

CURRENT ACTIVITY This mitigation field, soil visually

INSTRUMENT TYPE ✓ I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_

INSTRUMENT BASELINE ✓ A

PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS ✓ A

CHAMBER I.D. ✓ B PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_

CHAMBER SEAL ✓ Y CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_

AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', ✓ 2 mph Wind at Seal, \_\_\_\_\_ mph

TEMP \_\_\_\_\_ RAIN: Yes  No  Comment \_\_\_\_\_

PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None  \_\_\_\_\_

SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used

SWEEP AIR ✓ H CC 5000 SUPPLIER ✓ M PSIG START 1400 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		NA					
			Surf	Air	Surf	Air						
0836	✓ C	0							✓ SF-3CR	28" Hg		
0842		1							✓ SF-3CRD	20" Hg		
0848		2										
0854		3										
0900		4										
0906	*	5	63	67	65	59			✓ SF-3CR	Can # 2764		
0911									✓ SF-3CRD	Can # 726		

## COMMENTS:

## SITE DIAGRAM

Soil surface (1" wet)  
 Number 6  
 Both ends broken and  
 1" diameter live  
 (dust) present.

✓ SF-3CR	✓ SF-3CR
✓ SF-3CRD	✓ SF-3CRD

✓ SF-3CR

✓ SF-3CRD

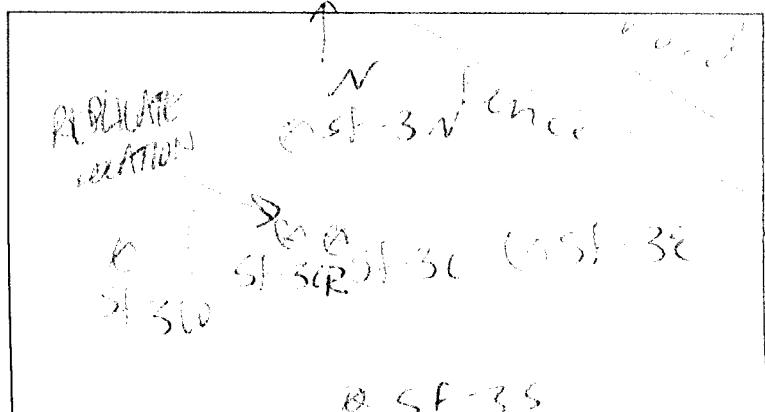
✓ SF-3CR

✓ SF-3CRD

✓ SF-3CR

✓ SF-3CRD

✓ SF-3CR



# SURFACE FLUX MEASUREMENT DATA FORM

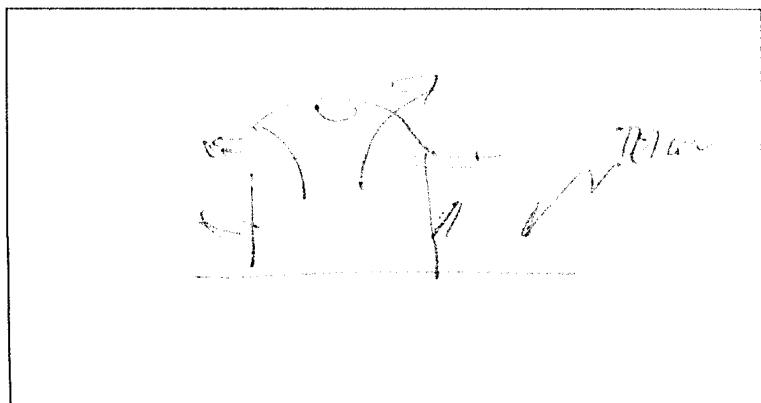
SYSTEM  
BLANK

DATE 2/07/2010 SAMPLERS ES/KIS  
 LOCATION System BLANK  
 SURFACE DESCRIPTION UTTR (inter room)  
 CURRENT ACTIVITY \_\_\_\_\_  
 INSTRUMENT TYPE \_\_\_\_\_ I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE \_\_\_\_\_  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS \_\_\_\_\_  
 CHAMBER I.D. C PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL B7 CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', \_\_\_\_\_ mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment NA  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR CHP CC 37635 SUPPLIER SM PSIG START 100 PSIG STOP \_\_\_\_\_  
Comments

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		NA	NA				
			Surf	Air	Surf	Air						
0900	5.6	0								2824		
0900		1										
0912	↓	2										
0918	↓	3										
0924		4										
0930		5								2823-01 2824		

COMMENTS:

SITE DIAGRAM



# SURFACE FLUX MEASUREMENT DATA FORM

System  
BLANK

DATE 2/11/10 SAMPLERS OBKIS  
 LOCATION Shallow Bank  
 SURFACE DESCRIPTION Bottom  
 CURRENT ACTIVITY \_\_\_\_\_  
 INSTRUMENT TYPE \_\_\_\_\_ I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE \_\_\_\_\_  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS \_\_\_\_\_  
 CHAMBER I.D. B PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL Y CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', \_\_\_\_\_ mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment N/A  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR 0.4L CC 32633 SUPPLIER SM PSIG START 1500 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		N/A	N/A				
			Surf	Air	Surf	Air						
0901	5.0	0										
0906	1	1										
0912	1	2										
0918	1	3										
0924	1	4										
0930	1	5										

COMMENTS:

SITE DIAGRAM

Same

# SURFACE FLUX MEASUREMENT DATA FORM

S74700  
AB

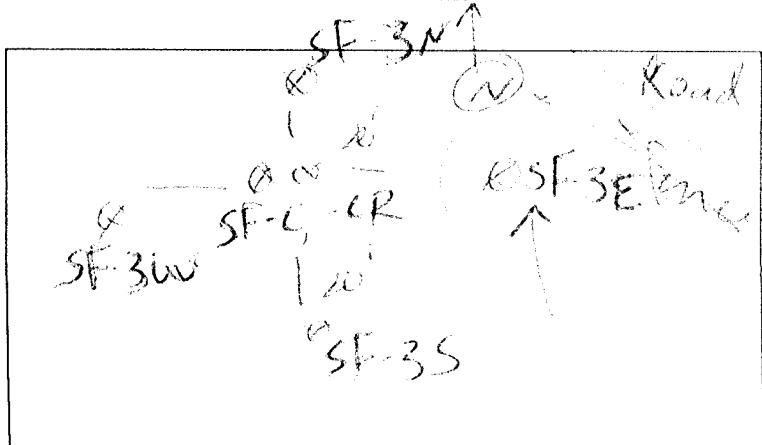
DATE 11/18/00 SAMPLERS CE5, K13  
 LOCATION Station 3E, SE-3E  
 SURFACE DESCRIPTION Sand/Silt, damp from previous rains > 1 week ago.  
 CURRENT ACTIVITY Microlotter slightly damp below seal (Notches)  
 INSTRUMENT TYPE L1 I.D. NO.  TYPE  ID NO. 279700  
 INSTRUMENT BASELINE V1  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS NA  
 CHAMBER I.D. C PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL T CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 0 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP 64 RAIN: Yes  No  Comment \_\_\_\_\_  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR 0.1 L/min CC 56636 SUPPLIER GM PSIG START 16.00 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		NA					
			Surf	Air	Surf	Air						
0842	0.0	0							SF-3E	2716		
0848		1										
0854		2										
0900		3	51°	61°	64°	51°						
0906		4										
0912		5							Si 31	Can 16.93		

## COMMENTS:

- 2" N. of Sta. 3E flag  
 - New bush probably why  
 it's still damp

## SITE DIAGRAM



# SURFACE FLUX MEASUREMENT DATA FORM

S12/10  
B3

DATE 2/19/10 SAMPLERS VIS, VIS

LOCATION SF-3N SF-3W

SURFACE DESCRIPTION undisturbed, damp from previous rains, VAS RPM

CURRENT ACTIVITY soil to soil dump DATE 2/19/2010

INSTRUMENT TYPE VA I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_

INSTRUMENT BASELINE VA

PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS VA

CHAMBER I.D. 12 PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_

CHAMBER SEAL 7 CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_

AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 0 mph Wind at Seal, \_\_\_\_\_ mph

TEMP \_\_\_\_\_ RAIN: Yes  No  Comment \_\_\_\_\_

PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None  \_\_\_\_\_

SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used  \_\_\_\_\_

SWEEP AIR VHP CC 5063 SUPPLIER SM PSIG START 1700 PSIG STOP \_\_\_\_\_

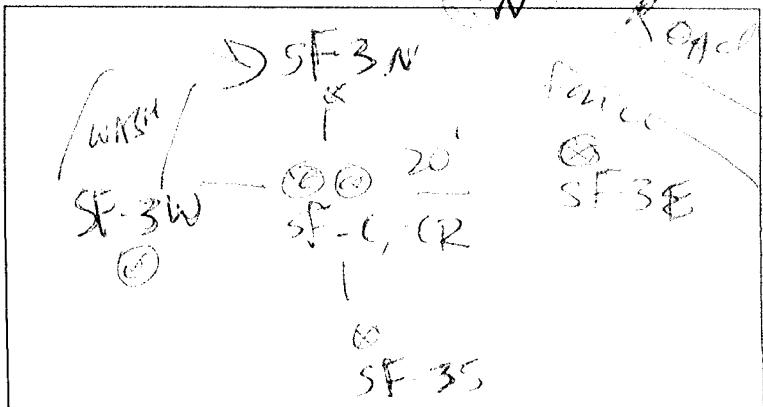
Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		NA					
			Surf	Air	Surf	Air						
0842	0.0	0							SF-3N	26.5°F		
0848		1										
0854		2										
0900		3										
0906		4	59°	64°	59	57°						
0912	↓	5							SF-3N	6m + 510		

## COMMENTS:

Chamber ~7.5' wide  
SF-3N dry

The 1st soil sample

## SITE DIAGRAM



# SURFACE FLUX MEASUREMENT DATA FORM

S70710  
10/10

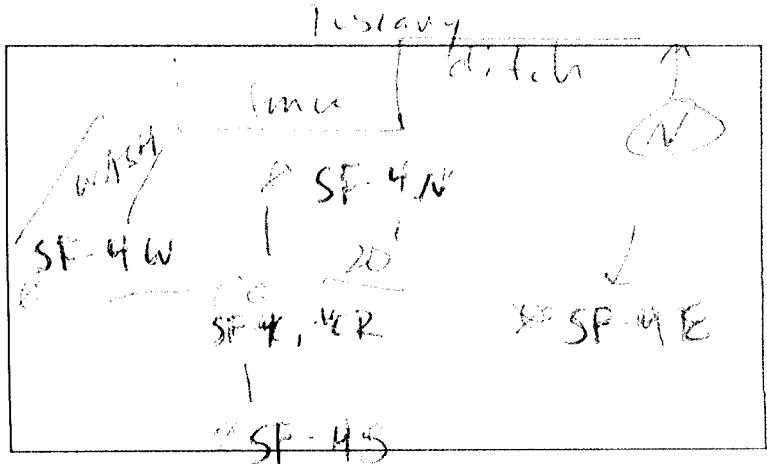
DATE 10/10/10 SAMPLERS CFS, FTS  
 LOCATION Shallow - 4E SF - 4E  
 SURFACE DESCRIPTION Sand (S), Time 21910  
 CURRENT ACTIVITY Wind soil than previous location.  
 INSTRUMENT TYPE V/A I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE V/A  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS 64  
 CHAMBER I.D. \_\_\_\_\_ PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL Y CONDENSATION: Yes  No  BARM PRESS Z8.18" Hg c. 1219  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 0.3 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment B = 28.18" Hg c. 1219, AH = 51.3 m  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR 0.11 CC 0.635 SUPPLIER SMA PSIG START 1000 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv) <i>W Aft Av Pk</i>	Sample Number	Comments			
			Chamber		Ambient							
			Surf	Air	Surf	Air						
1717	0.11	0							27.98" (3.44)			
1723		1							By water			
1729		2							over land			
1735		3										
1741		4					28.13					
1747		5	109	83	90	65		35.4E	in. # 696			
1753							28.10					

**COMMENTS:**

Altitude Sensors

B = 28.12" Hg c. 1219

**SITE DIAGRAM**


# SURFACE FLUX MEASUREMENT DATA FORM

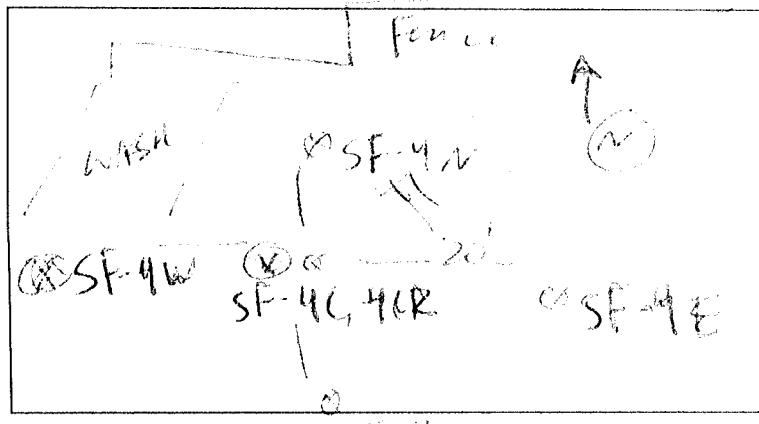
SOMMER  
Aug

DATE 2/28/10 SAMPLERS 189, KTS  
 LOCATION SF-4N, SF-4N  
 SURFACE DESCRIPTION Gravel soil, rained 1/19/10 last  
 CURRENT ACTIVITY Surf direction per location (3), soil is dry  
 INSTRUMENT TYPE VA I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE VA  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS VA  
 CHAMBER I.D. 15 PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL Y CONDENSATION: Yes  No  BAROMETRIC PRESS 28.15" Hg 01219  
 AMBIENT CONDITIONS: Sun  P. Sun  Cloudy  Wind at 5', 3 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment Altitude 611m  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR VHP CC 50635 SUPPLIER 2M PSIG START 1000 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv) <i>(41.00 41.00 41.00)</i>	Sample Number	Comments			
			Chamber		Ambient							
			Surf	Air	Surf	Air						
1217	0	0										
1223		1										
1224		2										
1245		3										
1241		4					41.13					
1247	5	91	86	88	66			SF-4N Int#608				

COMMENTS:

SITE DIAGRAM



# SURFACE FLUX MEASUREMENT DATA FORM

STATION  
#2

DATE 7/18/10 SAMPLERS (SF-4C, SF-4C)

LOCATION Santa Fe, NM, SF-4C

SURFACE DESCRIPTION sand/soil, last rain 7/9/10

CURRENT ACTIVITY mining, soil damp, on little hill

INSTRUMENT TYPE V/A I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_

INSTRUMENT BASELINE V/A

PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS V/A

CHAMBER I.D. 6 PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY

CHAMBER SEAL Y CONDENSATION: Yes  No  BARM PRESS 28.12" Hg 1307

AMBIENT CONDITIONS: Sun  P. Sun  Cloudy  Wind at 5', 0-2 mph Wind at Seal, 0 mph

TEMP 70° RAIN: Yes  No  Comment little rain

PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None

SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used

SWEEP AIR VMP CC 50635 SUPPLIER SMA PSIG START 900 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv) <i>Baro P</i> <i>*Hg'</i>	Sample Number	Comments			
			Chamber		Ambient							
			Surf	Air	Surf	Air						
1302	5.0	0							<i>Site elevation 522 m</i>			
1303		1										
1314		2					28.12					
1326		3										
1336		4		6								
1352	↓	5	65	60	65	69	28.10	SF-4C Cont 612				
1406							28.10					

## COMMENTS:

*Wash area in background  
noted after last sample completed.*

*WASH*

*SF-4S 1128*

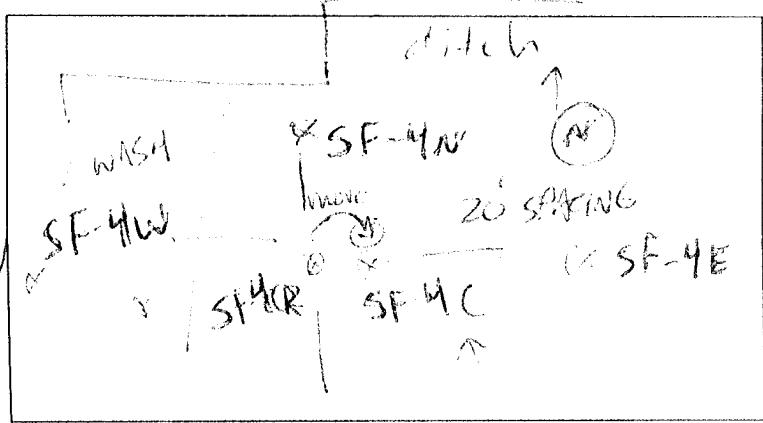
*1411 1122*

*DO NOT REQUEST NEW SURFACE/FLASH*

*Flux SF-4C 0.2*

*1414 1122*

## SITE DIAGRAM



# SURFACE FLUX MEASUREMENT DATA FORM

STATION  
64

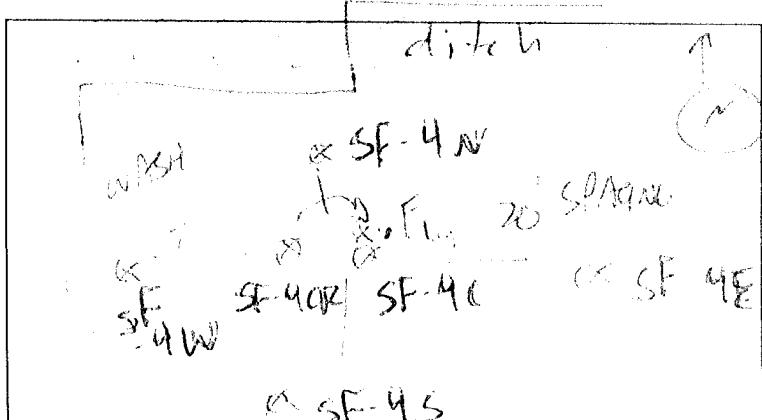
DATE 1/16/10 SAMPLERS CFS, PFS  
 LOCATION SF-4CR, SF-4CR  
 SURFACE DESCRIPTION sand/silt, lot 204 4/16 2/9/10  
 CURRENT ACTIVITY microtree dump, on hill  
 INSTRUMENT TYPE V1 I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE NA  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS NA  
 CHAMBER I.D. B PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL T CONDENSATION: Yes  No  BARM PRESS 28.11 "Hg 60 1311  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 12 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment A little 520m  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR VHP CC 5N SUPPLIER SM PSIG START 900 PSIG STOP \_\_\_\_\_  
50635

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv) <sup>BaSO4</sup> <sub>Hg"</sub>	Sample Number	Comments			
			Chamber		Ambient							
			Surf	Air	Surf	Air						
1307	5.0	0										
1308		1										
1314		2					28.12					
1320		3										
1326		4										
1332	V	5	98	85	90	68	28.10	65-4CR (n# 716)				
1340							28.10	65-4(R) (n# 692)				

## COMMENTS:

4/18 - 5/10/10 - 1000m  
6435 - BAR PRESS 28.10 "Hg

## SITE DIAGRAM



# SURFACE FLUX MEASUREMENT DATA FORM

SAFETY

W.L.

DATE 2/19/2010 SAMPLERS 103

LOCATION SPRINGFIELD ST 300 SF 4W

SURFACE DESCRIPTION (A) DRY GROUND - SOME MOIST SOIL PATCHES LARGELY DRY

CURRENT ACTIVITY SELL GAS TESTING POST FLUX DRY SOIL/GROUND PERTURBED

INSTRUMENT TYPE \_\_\_\_\_ I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_

INSTRUMENT BASELINE \_\_\_\_\_

PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS

AMBIENT CONCENTRATIONS \_\_\_\_\_

CHAMBER I.D. \_\_\_\_\_ PHOTOTAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_

CHAMBER SEAL \_\_\_\_\_ CONDENSATION: Yes  No  BAROMETRIC PRESSURE \_\_\_\_\_

AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 0 mph Wind at Seal, \_\_\_\_\_ mph

TEMP \_\_\_\_\_ RAIN: Yes  No  Comment \_\_\_\_\_

PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None  \_\_\_\_\_

SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used  \_\_\_\_\_

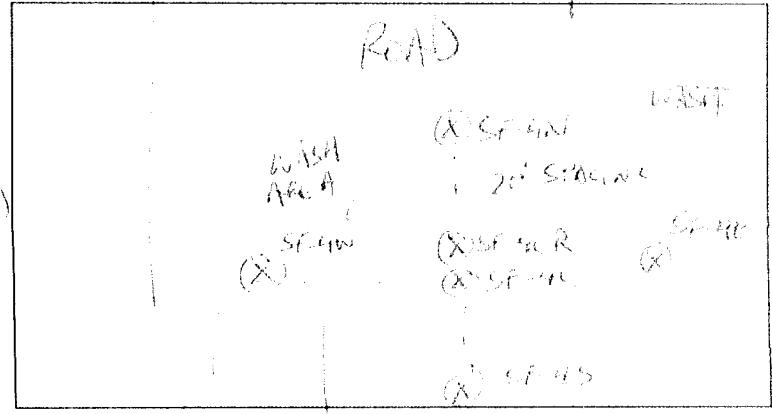
SWEEP AIR VHP CC 60635 SUPPLIER GM PSIG START 100.600 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		Surf	Air				
			Surf	Air	Surf	Air						
11:41	500	0					28.10			@ 326 m		
11:51	1	1								100% relative humidity		
12:01	1	2								DP = 33 mmHg		
12:37	100	3	74	72	71	67	28.65					
12:43	100	4										
12:49	100	5					28.20		ST-45	ST-60S		
									ST-41W	ST-71E		

## COMMENTS:

AMBIENT WIND SPEED: 0 MPH, WIND DIR: NNE  
12:38 100% HUMIDITY, 100% RH

## SITE DIAGRAM



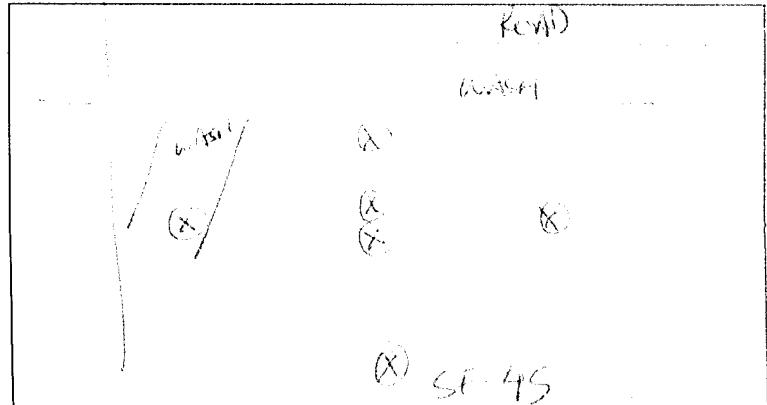
AMBIENT WIND SPEED: 0 MPH, WIND DIR: NNE

AMBIENT WIND SPEED: 0 MPH, WIND DIR: NNE

STATION  
#4**SURFACE FLUX MEASUREMENT DATA FORM**

DATE 2/19/2010 SAMPLERS GEOS  
 LOCATION CITYWIDE SF-4S  
 SURFACE DESCRIPTION Soil/sand, dry near wash area (on wash basin top)  
 CURRENT ACTIVITY N/A  
 INSTRUMENT TYPE N/A I.D. NO. \_\_\_\_\_ TYPE \_\_\_\_\_ ID NO. \_\_\_\_\_  
 INSTRUMENT BASELINE N/A  
 PROJECT QC: BACKGROUND MEASUREMENTS  BLANK MEASUREMENTS  REPLICATE MEASUREMENTS   
 AMBIENT CONCENTRATIONS \_\_\_\_\_  
 CHAMBER I.D. 7 PHOTO TAKEN: Yes  No  STACK SIZE/VELOCITY \_\_\_\_\_  
 CHAMBER SEAL 7 CONDENSATION: Yes  No  BARM PRESS \_\_\_\_\_  
 AMBIENT CONDITIONS: Sun  P.Sun  Cloudy  Wind at 5', 12 mph Wind at Seal, \_\_\_\_\_ mph  
 TEMP \_\_\_\_\_ RAIN: Yes  No  Comment Clouds in, rain clouds  
 PRIOR CHAMBER CLEANING: Full Wash  Wet Wipe  Dry Wipe  None   
 SAMPLE LINE: BACK FLUSHED PRIOR TO START  PURGED PRIOR TO SAMPLING  New  Used   
 SWEEP AIR VHP CC 32635 SUPPLIER SA PSIG START 600 PSIG STOP \_\_\_\_\_

Time	Sweep Air (L/min)	Residence Number	Temperature (°F)				Real-Time (ppmv)		Sample Number	Comments		
			Chamber		Ambient		BAR Press "Hg	Hg				
			Surf	Air	Surf	Air						
11:49	50	0					28.112	"Hg		2 326 m		
11:58	1	1										
12:01	1	2										
12:07		3	71	71	62	68	28.08					
12:13		4										
12:19		5							SF-4S	#605		

COMMENTS: CS SITE SURVEYBAR Press 0.01 28.12 "Hg**SITE DIAGRAM**1(N)CS SITE SURVEY1(N) CS 31SA 40 63

*CE Schmidt, Ph.D.  
Environmental Consultant*

ATTACHMENT B

CHAIN OF CUSTODY







*CE Schmidt, Ph.D.  
Environmental Consultant*

ATTACHMENT C

LABORATORY REPORTS

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070  
Laboratory Number: 01

File: 1007001A.D  
Description: STA-3S-5  
Can/Tube#: 365  
Sam\_Type: SA  
QC\_Batch: 030810-MS1  
Air Volume: 200 ml

Date Sampled: 02/17/10 Time: 11:15  
Date Received: 02/18/10  
Date Extracted:  
Date Analyzed: 03/08/10 Time: 14:39  
Can Dilution Factor: 1.62 2  
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.43	2.13	0.43	2.17	10.88	2.17	U
74-87-3	Chloromethane	0.41	2.07	1.22	0.88	4.40	2.61	J
75-01-4	Vinyl chloride	0.42	2.11	0.42	1.11	5.56	1.11	U
74-83-9	Bromomethane	0.42	2.11	0.42	1.69	8.44	1.69	U
75-00-3	Chloroethane	0.42	2.11	0.42	1.15	5.74	1.15	U
64-17-5	Ethanol	1.39	6.97	4.52	2.71	13.56	8.80	J
75-69-4	Trichlorofluoromethane	0.42	2.11	0.42	2.44	12.22	2.44	U
75-05-8	Acetonitrile	0.83	4.13	0.83	1.43	7.17	1.43	U
67-64-1	Acetone	0.46	9.17	25.99	1.12	22.50	63.77	
4227-95-6	Methyl iodide	0.12	0.61	0.12	0.73	3.67	0.73	U
75-35-4	1,1-Dichloroethene	0.41	2.05	0.41	1.67	8.39	1.67	U
76-13-1	Freon 113	0.41	2.07	0.41	3.27	16.34	3.27	U
75-09-2	Dichloromethane	0.42	2.11	0.42	1.51	7.55	1.51	U
75-15-0	Carbon disulfide	0.35	1.73	0.35	1.11	5.57	1.11	U
156-60-5	trans-1,2-Dichloroethene	0.27	5.38	0.27	1.10	22.01	1.10	U
1634-04-4	Methyl tert butyl ether	0.27	5.50	0.27	1.02	20.46	1.02	U
75-34-3	1,1-Dichloroethane	0.41	2.05	0.41	1.71	8.57	1.71	U
108-05-4	Vinyl acetate	0.33	6.55	0.33	1.19	23.83	1.19	U
78-93-3	2-Butanone	0.38	1.90	5.77	1.16	5.77	17.56	
74-97-5	Bromochloromethane	0.20	1.00	0.20	1.08	5.44	1.08	U
78-83-1	Isobutyl alcohol	0.31	6.16	0.31	0.96	19.26	0.96	U
156-59-2	cis-1,2-Dichloroethene	0.42	2.09	0.42	1.71	8.55	1.71	U
594-20-7	2,2-Dichloropropane	0.33	6.63	0.33	1.58	31.66	1.58	U
67-66-3	Chloroform	0.41	2.07	177.63	2.08	10.41	895.67	
71-55-6	1,1,1-Trichloroethane	0.41	2.07	0.41	2.33	11.64	2.33	U
107-06-2	1,2-Dichloroethane	0.42	2.09	0.42	1.74	8.74	1.74	U
563-58-6	1,1-Dichloropropene	0.25	1.23	0.25	1.15	5.77	1.15	U
71-43-2	Benzene	0.42	2.09	1.48	1.38	6.89	4.80	J
56-23-5	Carbon tetrachloride	0.41	2.07	3.14	2.68	13.42	20.38	
142-82-5	n-Heptane	0.23	1.13	0.63	0.98	4.80	2.66	J
78-87-5	1,2-Dichloropropane	0.42	2.09	0.42	1.99	9.97	1.99	U
123-91-1	1,4 Dioxane	0.76	3.81	0.76	2.83	14.16	2.83	U
74-95-3	Dibromomethane	0.14	0.70	0.14	1.03	5.11	1.03	U
79-01-6	Trichloroethene	0.42	2.09	0.42	2.31	11.60	2.31	U
75-27-4	Bromodichloromethane	0.15	0.75	0.15	1.04	5.21	1.04	U
108-10-1	Methyl Isobutyl Ketone	0.28	1.41	0.28	1.19	5.96	1.19	U
10061-01-5	cis-1,3-Dichloropropene	0.43	2.15	0.43	2.01	10.06	2.01	U
108-88-3	Toluene	0.42	2.09	1.16	1.62	8.13	4.50	J
10061-02-6	trans-1,3-Dichloropropene	0.42	2.11	0.42	1.97	9.87	1.97	U
79-00-5	1,1,2-Trichloroethane	0.41	2.07	0.41	2.33	11.64	2.33	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.26	1.32	0.58	1.12	5.59	2.46	J
142-28-9	1,3-Dichloropropane	0.25	1.22	0.25	1.17	5.84	1.17	U
124-48-1	Dibromochloromethane	0.15	0.75	0.15	1.31	6.56	1.31	U
106-93-4	1,2-Dibromoethane	0.42	2.11	0.42	3.34	16.71	3.34	U
127-18-4	Tetrachloroethene	0.41	2.07	0.47	2.89	14.46	3.29	J
108-90-7	Chlorobenzene	0.41	2.07	0.41	1.96	9.82	1.96	U
630-20-6	1,1,1,2-Tetrachloroethane	0.15	0.77	0.15	1.09	5.45	1.09	U
100-41-4	Ethylbenzene	0.42	2.11	1.03	1.89	9.44	4.61	J
108-38-3	m & p-Xylene	0.83	4.17	1.23	3.74	18.71	5.50	J
100-42-5	Styrene	0.42	2.09	0.42	1.84	9.20	1.84	U
75-25-2	Bromoform	0.10	0.50	0.10	1.07	5.36	1.07	U
95-47-6	o-Xylene	0.41	2.07	0.41	1.85	9.26	1.85	U
79-34-5	1,1,2,2-Tetrachloroethane	0.41	2.07	0.41	2.93	14.64	2.93	U
96-18-4	1,2,3-Trichloropropane	0.18	0.92	0.18	1.14	5.70	1.14	U
103-65-1	n-Propylbenzene	0.28	1.40	2.59	1.42	7.11	13.13	
98-82-8	Isopropylbenzene	0.28	1.42	1.27	1.44	7.20	6.44	J
108-67-8	1,3,5-Trimethylbenzene	0.43	2.15	0.43	2.18	10.90	2.18	U
98-06-6	tert-butyl benzene	0.25	1.24	0.25	1.40	7.02	1.41	J
95-63-6	1,2,4-Trimethylbenzene	0.41	2.07	1.49	2.10	10.48	7.57	J
135-98-8	sec-butylbenzene	0.26	1.32	0.26	1.49	7.48	1.49	U
541-73-1	1,3-Dichlorobenzene	0.41	2.07	0.41	2.56	12.82	2.56	U
99-87-6	Isopropyltoluene	0.26	1.30	0.26	1.47	7.34	1.47	U
100-44-7	Benzyl chloride	0.48	4.76	0.48	2.55	25.46	2.55	U
106-46-7	1,4-Dichlorobenzene	0.83	8.26	0.83	5.13	51.29	5.13	U
104-51-8	n-Butylbenzene	0.49	4.86	0.95	2.75	27.54	5.39	J
95-50-1	1,2-Dichlorobenzene	0.81	8.10	0.81	5.03	50.28	5.03	U
96-12-8	1,2-Dibromo-3-chloropropane	1.36	5.43	1.36	13.54	54.16	13.54	U
120-82-1	1,2,4-Trichlorobenzene	0.83	8.34	0.83	6.39	63.91	6.39	U
87-68-3	Hexachlorobutadiene	0.83	8.34	0.83	9.19	91.89	9.19	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.619		106		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

## ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 02

File: 1007002A.D

Date Sampled: 02/17/10 Time: 12:55

Description: STA-3S-10

Date Received: 02/18/10

Can/Tube#: 357

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/14/10

QC\_Batch: 031410-MS1

Can Dilution Factor: 1.75

Air Volume: 100 ml

Not Detected Flag:

U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.92	4.60	0.92	4.69	23.50	4.69	U
74-87-3	Chloromethane	0.89	4.46	0.89	1.90	9.52	1.90	U
75-01-4	Vinyl chloride	0.91	4.55	0.91	2.40	12.01	2.40	U
74-83-9	Bromomethane	0.91	4.55	0.91	3.65	18.23	3.65	U
75-00-3	Chloroethane	0.91	4.55	0.91	2.48	12.39	2.48	U
64-17-5	Ethanol	3.01	15.05	3.01	5.86	29.30	5.86	U
75-89-4	Trichlorofluoromethane	0.91	4.55	0.91	5.28	26.40	5.28	U
75-05-8	Acetonitrile	1.79	8.93	1.79	3.10	15.49	3.10	U
67-64-1	Acetone	0.99	19.81	38.18	2.43	48.60	93.67	
4227-95-6	Methyl iodide	0.26	1.31	0.26	1.58	7.92	1.58	U
75-35-4	1,1-Dichloroethene	0.88	4.43	0.88	3.62	18.12	3.62	U
76-13-1	Freon 113	0.89	4.46	0.89	7.06	35.30	7.06	U
75-09-2	Dichloromethane	0.91	4.55	0.91	3.26	16.31	3.26	U
75-15-0	Carbon disulfide	0.75	3.75	0.75	2.40	12.04	2.40	U
156-60-5	trans-1,2-Dichloroethene	0.58	11.62	0.58	2.38	47.55	2.38	U
1634-04-4	Methyl tert butyl ether	0.59	11.88	0.59	2.21	44.21	2.21	U
75-34-3	1,1-Dichloroethane	0.88	4.43	0.88	3.69	18.51	3.69	U
108-05-4	Vinyl acetate	0.71	14.16	0.71	2.57	51.48	2.57	U
78-93-3	2-Butanone	0.82	4.10	8.79	2.50	12.47	26.77	
74-97-5	Bromochloromethane	0.43	2.15	0.43	2.34	11.76	2.34	U
78-83-1	Isobutyl alcohol	0.67	13.30	0.67	2.08	41.62	2.08	U
156-59-2	cis-1,2-Dichloroethene	0.90	4.52	0.90	3.69	18.48	3.69	U
594-20-7	2,2-Dichloropropane	0.72	14.33	0.72	3.42	68.39	3.42	U
67-66-3	Chloroform	0.89	4.46	536.31	4.50	22.50	2,704.20	
71-55-6	1,1,1-Trichloroethane	0.89	4.46	0.89	5.03	25.14	5.03	U
107-06-2	1,2-Dichloroethane	0.90	4.52	0.90	3.77	18.88	3.77	U
563-58-6	1,1-Dichloropropene	0.53	2.66	0.53	2.49	12.47	2.49	U
71-43-2	Benzene	0.90	4.52	4.11	2.97	14.89	13.54	J
56-23-5	Carbon tetrachloride	0.89	4.46	8.38	5.80	28.98	54.41	
142-82-5	n-Heptane	0.49	2.45	1.54	2.07	10.37	8.52	J
78-87-5	1,2-Dichloropropane	0.90	4.52	0.90	4.30	21.55	4.30	U
123-91-1	1,4 Dioxane	1.65	8.23	1.65	6.12	30.60	6.12	U
74-95-3	Dibromomethane	0.30	1.51	0.30	2.22	11.05	2.22	U
79-01-6	Trichloroethene	0.90	4.52	0.90	5.00	25.05	5.00	U
75-27-4	Bromodichloromethane	0.32	1.63	0.32	2.24	11.26	2.24	U
108-10-1	Methyl Isobutyl Ketone	0.61	3.05	0.61	2.58	12.88	2.58	U
10061-01-5	cis-1,3-Dichloropropene	0.93	4.64	0.93	4.35	21.74	4.35	U
108-88-3	Toluene	0.90	4.52	6.32	3.51	17.56	24.59	
10061-02-6	trans-1,3-Dichloropropene	0.91	4.55	0.91	4.27	21.33	4.27	U
79-00-5	1,1,2-Trichloroethane	0.89	4.46	0.89	5.03	25.14	5.03	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.57	2.85	0.57	2.42	12.07	2.42	U
142-28-9	1,3-Dichloropropane	0.53	2.64	0.53	2.53	12.61	2.53	U
124-48-1	Dibromochloromethane	0.32	1.61	0.32	2.82	14.16	2.82	U
106-93-4	1,2-Dibromoethane	0.91	4.55	0.91	7.22	36.10	7.22	U
127-18-4	Tetrachloroethene	0.89	4.46	1.11	6.25	31.25	7.79	J
108-90-7	Chlorobenzene	0.89	4.46	0.89	4.24	21.22	4.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.33	1.66	0.33	2.36	11.78	2.36	U
100-41-4	Ethylbenzene	0.91	4.55	0.91	4.08	20.41	4.08	U
108-38-3	m & p-Xylene	1.80	9.01	2.87	8.08	40.42	12.89	J
100-42-5	Styrene	0.90	4.52	0.90	3.97	19.87	3.97	U
75-25-2	Bromoform	0.22	1.09	0.22	2.31	11.58	2.31	U
95-47-6	o-Xylene	0.89	4.46	1.33	4.00	20.01	5.97	J
79-34-5	1,1,2,2-Tetrachloroethane	0.89	4.46	0.89	6.32	31.62	6.32	U
96-18-4	1,2,3-Trichloropropane	0.40	1.98	0.40	2.47	12.31	2.47	U
103-65-1	n-Propylbenzene	0.60	3.03	0.60	3.06	15.37	3.06	U
98-82-8	Isopropylbenzene	0.61	3.06	1.24	3.11	15.55	6.31	J
108-67-8	1,3,5-Trimethylbenzene	0.93	4.64	0.93	4.71	23.54	4.71	U
98-06-6	tert-butyl benzene	0.53	2.68	0.53	3.02	15.17	3.02	U
95-63-6	1,2,4-Trimethylbenzene	0.89	4.46	1.81	4.53	22.65	9.20	J
135-98-8	sec-butylbenzene	0.57	2.85	0.57	3.22	16.17	3.22	U
541-73-1	1,3-Dichlorobenzene	0.89	4.46	0.89	5.54	27.70	5.54	U
99-87-6	Isopropyltoluene	0.56	2.80	0.56	3.17	15.87	3.17	U
100-44-7	Benzyl chloride	1.03	10.29	1.03	5.50	55.01	5.50	U
106-46-7	1,4-Dichlorobenzene	1.79	17.85	1.79	11.08	110.81	11.08	U
104-51-8	n-Butylbenzene	1.05	10.50	1.05	5.95	59.51	5.95	U
95-50-1	1,2-Dichlorobenzene	1.75	17.50	1.75	10.86	108.64	10.86	U
96-12-8	1,2-Dibromo-3-chloropropane	2.93	11.73	2.93	29.25	117.00	29.25	U
120-82-1	1,2,4-Trichlorobenzene	1.80	18.03	1.80	13.81	138.08	13.81	U
87-68-3	Hexachlorobutadiene	1.80	18.03	1.80	19.85	198.52	19.85	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		10.111		101	* = Out	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 03

File: 1007003B.D

Date Sampled: 02/17/10 Time: 14:29

Description: STA-3W-5

Date Received: 02/18/10

Can/Tube#: 338

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/08/10

QC\_Batch: 030810-MS1

Can Dilution Factor: 2.05 Time: 16:45

Air Volume: 200 ml

Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.54	2.70	0.73	2.75	13.76	3.73	J
74-87-3	Chloromethane	0.52	2.61	1.19	1.11	5.57	2.53	J
75-01-4	Vinyl chloride	0.53	2.67	0.53	1.41	7.03	1.41	U
74-83-9	Bromomethane	0.53	2.67	0.53	2.14	10.68	2.14	U
75-00-3	Chloroethane	0.53	2.67	0.53	1.45	7.26	1.45	U
64-17-5	Ethanol	1.76	8.82	12.99	3.43	17.16	25.29	
75-69-4	Trichlorofluoromethane	0.53	2.67	0.53	3.09	15.46	3.09	U
75-05-8	Acetonitrile	1.05	5.23	1.05	1.81	9.07	1.81	U
67-64-1	Acetone	0.58	11.60	116.66	1.42	28.47	286.22	
4227-95-6	Methyl iodide	0.15	0.77	0.15	0.93	4.64	0.93	U
75-35-4	1,1-Dichloroethene	0.52	2.59	0.52	2.12	10.61	2.12	U
76-13-1	Freon 113	0.52	2.61	0.52	4.13	20.67	4.13	U
75-09-2	Dichloromethane	0.53	2.67	1.20	1.91	9.55	4.30	J
75-15-0	Carbon disulfide	0.44	2.19	0.44	1.41	7.05	1.41	U
156-60-5	trans-1,2-Dichloroethene	0.34	6.81	0.34	1.39	27.85	1.39	U
1634-04-4	Methyl tert butyl ether	0.35	6.96	0.35	1.29	25.89	1.29	U
75-34-3	1,1-Dichloroethane	0.52	2.59	0.52	2.16	10.84	2.16	U
108-05-4	Vinyl acetate	0.41	8.29	0.41	1.51	30.15	1.51	U
78-93-3	2-Butanone	0.48	2.40	34.97	1.46	7.30	106.49	
74-97-5	Bromochloromethane	0.25	1.26	0.25	1.37	6.89	1.37	U
78-83-1	Isobutyl alcohol	0.39	7.79	0.39	1.22	24.38	1.22	U
156-59-2	cis-1,2-Dichloroethene	0.53	2.64	0.53	2.16	10.82	2.16	U
594-20-7	2,2-Dichloropropane	0.42	8.39	0.42	2.00	40.06	2.00	U
67-66-3	Chloroform	0.52	2.61	18.99	2.64	13.18	95.76	
71-55-6	1,1,1-Trichloroethane	0.52	2.61	0.52	2.94	14.72	2.94	U
107-06-2	1,2-Dichloroethane	0.53	2.64	0.53	2.21	11.06	2.21	U
563-58-6	1,1-Dichloropropene	0.31	1.56	0.31	1.46	7.30	1.46	U
71-43-2	Benzene	0.53	2.64	1.35	1.74	8.72	4.44	J
56-23-5	Carbon tetrachloride	0.52	2.61	0.52	3.40	16.98	3.40	U
142-82-5	n-Heptane	0.29	1.44	1.11	1.21	6.07	4.69	J
78-87-5	1,2-Dichloropropane	0.53	2.64	0.53	2.52	12.62	2.52	U
123-91-1	1,4 Dioxane	0.96	4.82	0.98	3.58	17.92	3.58	U
74-95-3	Dibromomethane	0.18	0.88	0.18	1.30	6.47	1.30	U
79-01-6	Trichloroethene	0.53	2.64	0.53	2.93	14.67	2.93	U
75-27-4	Bromodichloromethane	0.19	0.95	0.19	1.31	6.59	1.31	U
108-10-1	Methyl Isobutyl Ketone	0.36	1.78	0.36	1.51	7.55	1.51	U
10061-01-5	cis-1,3-Dichloropropene	0.54	2.72	0.54	2.55	12.73	2.55	U
108-88-3	Toluene	0.53	2.64	12.57	2.05	10.29	48.89	
10061-02-6	trans-1,3-Dichloropropene	0.53	2.67	0.53	2.50	12.49	2.50	U
79-00-5	1,1,2-Trichloroethane	0.52	2.61	0.52	2.94	14.72	2.94	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag				
591-78-6	2-Hexanone	0.33	1.67	1.71	1.42	7.07	7.22					
142-28-9	1,3-Dichloropropane	0.31	1.55	0.31	1.48	7.39	1.48	U				
124-48-1	Dibromochloromethane	0.19	0.94	0.19	1.65	8.30	1.65	U				
106-93-4	1,2-Dibromoethane	0.53	2.67	0.53	4.23	21.15	4.23	U				
127-18-4	Tetrachloroethene	0.52	2.61	0.52	3.66	18.30	3.66	U				
108-90-7	Chlorobenzene	0.52	2.61	0.52	2.49	12.43	2.49	U				
630-20-6	1,1,1,2-Tetrachloroethane	0.20	0.97	0.20	1.38	6.90	1.38	U				
100-41-4	Ethylbenzene	0.53	2.67	1.10	2.39	11.95	4.95	J				
108-38-3	m & p-Xylene	1.06	5.28	6.76	4.73	23.67	30.34					
100-42-5	Styrene	0.53	2.64	0.53	2.32	11.64	2.32	U				
75-25-2	Bromoform	0.13	0.64	0.13	1.35	6.78	1.35	U				
95-47-6	o-Xylene	0.52	2.61	2.19	2.34	11.72	9.83	J				
79-34-5	1,1,2,2-Tetrachloroethane	0.52	2.61	0.52	3.70	18.52	3.70	U				
96-18-4	1,2,3-Trichloropropane	0.23	1.16	0.23	1.45	7.21	1.45	U				
103-65-1	n-Propylbenzene	0.35	1.77	0.35	1.80	9.00	1.80	U				
98-82-8	Isoisopropylbenzene	0.36	1.79	1.75	1.82	9.11	8.86	J				
108-67-8	1,3,5-Trimethylbenzene	0.54	2.72	0.54	2.76	13.79	2.76	U				
98-06-6	tert-butyl benzene	0.31	1.57	0.31	1.77	8.89	1.77	U				
95-63-6	1,2,4-Trimethylbenzene	0.52	2.61	1.84	2.65	13.27	9.34	J				
135-98-8	sec-butylbenzene	0.33	1.67	0.33	1.89	9.47	1.89	U				
541-73-1	1,3-Dichlorobenzene	0.52	2.61	0.52	3.25	16.23	3.25	U				
99-87-6	Isopropyltoluene	0.33	1.64	0.33	1.86	9.29	1.86	U				
100-44-7	Benzyl chloride	0.60	6.03	0.60	3.22	32.22	3.22	U				
106-46-7	1,4-Dichlorobenzene	1.05	10.46	1.05	6.49	64.90	6.49	U				
104-51-8	n-Butylbenzene	0.62	6.15	0.62	3.49	34.85	3.49	U				
95-50-1	1,2-Dichlorobenzene	1.03	10.25	1.03	6.36	63.63	6.36	U				
96-12-8	1,2-Dibromo-3-chloropropane	1.72	6.87	1.72	17.13	68.53	17.13	U				
120-82-1	1,2,4-Trichlorobenzene	1.06	10.56	1.06	8.09	80.88	8.09	U				
87-68-3	Hexachlorobutadiene	1.06	10.56	1.06	11.63	116.28	11.63	U				
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag					
Toluene-d8		10.000		% Rec.		Limits	* = Out					
8.500												
85												
70-130												

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 04

File: 1007004.A.D	Date Sampled: 02/17/10	Time: 14:40
Description: STA-3W-10	Date Received: 02/18/10	
Can/Tube#: 358	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/08/10	Time: 17:27
QC_Batch: 030810-MS1	Can Dilution Factor: 2.00	
Air Volume: 200 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.53	2.63	0.54	2.68	13.43	2.75	J
74-87-3	Chloromethane	0.51	2.55	1.13	1.09	5.44	2.40	J
75-01-4	Vinyl chloride	0.52	2.60	0.52	1.37	6.86	1.37	U
74-83-9	Bromomethane	0.52	2.60	0.52	2.08	10.42	2.08	U
75-00-3	Chloroethane	0.52	2.60	0.52	1.42	7.08	1.42	U
64-17-5	Ethanol	1.72	8.60	17.13	3.35	16.74	33.35	
75-69-4	Trichlorofluoromethane	0.52	2.60	0.52	3.02	15.09	3.02	U
75-05-8	Acetonitrile	1.02	5.10	1.02	1.77	8.85	1.77	U
67-64-1	Acetone	0.57	11.32	257.58	1.39	27.77	631.98	
4227-95-6	Methyl iodide	0.15	0.75	0.15	0.91	4.53	0.91	U
75-35-4	1,1-Dichloroethene	0.51	2.53	0.51	2.07	10.35	2.07	U
76-13-1	Freon 113	0.51	2.55	0.51	4.03	20.17	4.03	U
75-09-2	Dichloromethane	0.52	2.60	2.50	1.86	9.32	8.98	J
75-15-0	Carbon disulfide	0.43	2.14	0.75	1.37	6.88	2.43	J
156-60-5	trans-1,2-Dichloroethene	0.33	6.64	0.33	1.36	27.17	1.36	U
1634-04-4	Methyl tert butyl ether	0.34	6.79	0.34	1.26	25.26	1.26	U
75-34-3	1,1-Dichloroethane	0.51	2.53	0.51	2.11	10.58	2.11	U
108-05-4	Vinyl acetate	0.40	8.09	0.40	1.47	29.42	1.47	U
78-93-3	2-Butanone	0.47	2.34	58.55	1.43	7.12	172.17	
74-97-5	Bromochloromethane	0.25	1.23	0.25	1.34	6.72	1.34	U
78-83-1	Isobutyl alcohol	0.38	7.60	0.38	1.19	23.78	1.19	U
156-59-2	cis-1,2-Dichloroethene	0.52	2.58	0.52	2.11	10.56	2.11	U
594-20-7	2,2-Dichloropropane	0.41	8.19	0.41	1.95	39.08	1.95	U
67-66-3	Chloroform	0.51	2.55	57.04	2.57	12.86	287.61	
71-55-6	1,1,1-Trichloroethane	0.51	2.55	0.51	2.87	14.37	2.87	U
107-06-2	1,2-Dichloroethane	0.52	2.58	0.52	2.15	10.79	2.15	U
563-58-6	1,1-Dichloropropene	0.30	1.52	0.30	1.42	7.13	1.42	U
71-43-2	Benzene	0.52	2.58	1.40	1.70	8.51	4.62	J
58-23-5	Carbon tetrachloride	0.51	2.55	0.80	3.31	16.56	5.21	J
142-82-5	n-Heptane	0.28	1.40	1.41	1.18	5.92	5.95	
78-87-5	1,2-Dichloropropane	0.52	2.58	0.52	2.46	12.31	2.46	U
123-91-1	1,4 Dioxane	0.94	4.70	0.94	3.50	17.49	3.50	U
74-95-3	Dibromomethane	0.17	0.86	0.17	1.27	6.31	1.27	U
79-01-6	Trichloroethene	0.52	2.58	0.52	2.86	14.32	2.86	U
75-27-4	Bromo-dichloromethane	0.19	0.93	0.19	1.28	6.43	1.28	U
108-10-1	Methyl Isobutyl Ketone	0.35	1.74	0.35	1.47	7.36	1.47	U
10061-01-5	cis-1,3-Dichloropropene	0.53	2.66	0.53	2.48	12.42	2.48	U
108-88-3	Toluene	0.52	2.58	1.60	2.00	10.03	6.22	J
10061-02-6	trans-1,3-Dichloropropene	0.52	2.60	0.52	2.44	12.19	2.44	U
79-00-5	1,1,2-Trichloroethane	0.51	2.55	0.51	2.87	14.37	2.87	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.33	1.63	5.22	1.38	6.90	22.10	
142-28-9	1,3-Dichloropropane	0.30	1.51	0.30	1.44	7.21	1.44	U
124-48-1	Dibromochloromethane	0.18	0.92	0.18	1.61	8.09	1.61	U
106-93-4	1,2-Dibromoethane	0.52	2.60	0.52	4.13	20.63	4.13	U
127-18-4	Tetrachloroethene	0.51	2.55	0.51	3.57	17.85	3.57	U
108-90-7	Chlorobenzene	0.51	2.55	0.51	2.43	12.13	2.43	U
630-20-6	1,1,1,2-Tetrachloroethane	0.19	0.95	0.19	1.35	6.73	1.35	U
100-41-4	Ethylbenzene	0.52	2.60	0.52	2.33	11.66	2.33	U
108-38-3	m & p-Xylene	1.03	5.15	1.03	4.62	23.10	4.62	U
100-42-5	Styrene	0.52	2.58	0.52	2.27	11.35	2.27	U
75-25-2	Bromoform	0.12	0.62	0.12	1.32	6.62	1.32	U
95-47-6	o-Xylene	0.51	2.55	0.51	2.29	11.44	2.29	U
79-34-5	1,1,2,2-Tetrachloroethane	0.51	2.55	0.51	3.61	18.07	3.61	U
96-18-4	1,2,3-Trichloropropane	0.23	1.13	0.23	1.41	7.03	1.41	U
103-65-1	n-Propylbenzene	0.35	1.73	0.35	1.75	8.78	1.75	U
98-82-8	Isopropylbenzene	0.35	1.75	0.35	1.78	8.88	1.78	U
108-87-8	1,3,5-Trimethylbenzene	0.53	2.65	0.53	2.69	13.45	2.69	U
98-06-6	tert-butyl benzene	0.31	1.53	0.31	1.73	8.67	1.73	U
95-63-6	1,2,4-Trimethylbenzene	0.51	2.55	0.51	2.59	12.94	2.59	U
135-98-8	sec-butylbenzene	0.33	1.63	0.33	1.84	9.24	1.84	U
541-73-1	1,3-Dichlorobenzene	0.51	2.55	0.51	3.17	15.83	3.17	U
99-87-6	Isopropyltoluene	0.32	1.60	0.32	1.81	9.07	1.81	U
100-44-7	Benzyl chloride	0.59	5.88	0.59	3.14	31.44	3.14	U
106-48-7	1,4-Dichlorobenzene	1.02	10.20	1.02	6.33	63.32	6.33	U
104-51-8	n-Butylbenzene	0.60	6.00	0.60	3.40	34.00	3.40	U
95-50-1	1,2-Dichlorobenzene	1.00	10.00	1.00	6.21	62.08	6.21	U
96-12-8	1,2-Dibromo-3-chloropropane	1.68	6.70	1.68	16.71	66.86	16.71	U
120-82-1	1,2,4-Trichlorobenzene	1.03	10.30	1.03	7.89	78.90	7.89	U
87-68-3	Hexachlorobutadiene	1.03	10.30	1.03	11.34	113.44	11.34	U
Surrogate Recovery		Spike Amt ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		10.142		101	* = Out	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = pobV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**ENVIRONMENTAL**  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 05

File: 1007005A.D  
Description: STA-3C-5-REP  
Can/Tube#: 398  
Sam\_Type: SA  
QC\_Batch: 030810-MS1  
Air Volume: 200 ml

Date Sampled: 02/18/10 Time: 8:14  
Date Received: 02/23/10  
Date Extracted:  
Date Analyzed: 03/08/10 Time: 18:13  
Can Dilution Factor: 1.28 2  
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.68	0.65	1.72	8.59	3.34	J
74-87-3	Chloromethane	0.33	1.63	2.35	0.70	3.48	5.02	
75-01-4	Vinyl chloride	0.33	1.66	0.33	0.88	4.39	0.88	U
74-83-9	Bromomethane	0.33	1.66	0.33	1.33	6.67	1.33	U
75-00-3	Chloroethane	0.33	1.66	0.66	0.91	4.53	1.81	J
64-17-5	Ethanol	1.10	5.50	8.21	2.14	10.72	15.98	
75-69-4	Trichlorofluoromethane	0.33	1.66	0.33	1.93	9.66	1.93	U
75-05-8	Acetonitrile	0.65	3.26	0.65	1.13	5.67	1.13	U
67-64-1	Acetone	0.36	7.24	73.93	0.89	17.78	181.39	
4227-95-6	Methyl iodide	0.10	0.48	0.10	0.58	2.90	0.58	U
75-35-4	1,1-Dichloroethene	0.32	1.62	0.32	1.32	6.63	1.32	U
76-13-1	Freon 113	0.33	1.63	0.33	2.58	12.91	2.58	U
75-09-2	Dichloromethane	0.33	1.66	0.65	1.19	5.97	2.32	J
75-15-0	Carbon disulfide	0.27	1.37	0.44	0.88	4.40	1.40	J
156-60-5	trans-1,2-Dichloroethene	0.21	4.25	0.21	0.87	17.39	0.87	U
1634-04-4	Methyl tert butyl ether	0.22	4.35	0.22	0.81	16.17	0.81	U
75-34-3	1,1-Dichloroethane	0.32	1.62	0.32	1.35	6.77	1.35	U
108-05-4	Vinyl acetate	0.26	5.18	0.26	0.94	18.83	0.94	U
78-93-3	2-Butanone	0.30	1.50	8.83	0.91	4.56	26.88	
74-97-5	Bromochloromethane	0.16	0.79	0.16	0.86	4.30	0.88	J
78-83-1	Isobutyl alcohol	0.24	4.86	0.24	0.76	15.22	0.76	U
156-59-2	cis-1,2-Dichloroethene	0.33	1.65	0.33	1.35	6.76	1.35	U
594-20-7	2,2-Dichloropropane	0.26	5.24	0.26	1.25	25.01	1.25	U
67-66-3	Chloroform	0.33	1.63	1.54	1.65	8.23	7.78	J
71-55-6	1,1,1-Trichloroethane	0.33	1.63	0.33	1.84	9.19	1.84	U
107-06-2	1,2-Dichloroethane	0.33	1.65	0.33	1.38	6.90	1.38	U
563-58-6	1,1-Dichloropropene	0.19	0.97	0.19	0.91	4.56	0.91	U
71-43-2	Benzene	0.33	1.65	1.15	1.09	5.45	3.81	J
56-23-5	Carbon tetrachloride	0.33	1.63	0.33	2.12	10.60	2.12	U
142-82-5	n-Heptane	0.18	0.90	0.31	0.76	3.79	1.32	J
78-87-5	1,2-Dichloropropane	0.33	1.65	0.33	1.57	7.88	1.57	U
123-91-1	1,4 Dioxane	0.60	3.01	0.60	2.24	11.19	2.24	U
74-95-3	Dibromomethane	0.11	0.55	0.11	0.81	4.04	0.81	U
79-01-6	Trichloroethene	0.33	1.65	0.33	1.83	9.16	1.83	U
75-27-4	Bromodichloromethane	0.12	0.60	0.12	0.82	4.12	0.82	U
108-10-1	Methyl Isobutyl Ketone	0.22	1.11	0.22	0.94	4.71	0.94	U
10061-01-5	cis-1,3-Dichloropropene	0.34	1.70	0.34	1.59	7.95	1.59	U
108-88-3	Toluene	0.33	1.65	3.39	1.28	6.42	13.20	
10061-02-6	trans-1,3-Dichloropropene	0.33	1.66	0.33	1.56	7.80	1.56	U
79-00-5	1,1,2-Trichloroethane	0.33	1.63	0.33	1.84	9.19	1.84	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.21	1.04	0.21	0.88	4.41	0.88	U
142-28-9	1,3-Dichloropropane	0.19	0.97	0.19	0.92	4.61	0.92	U
124-48-1	Dibromochloromethane	0.12	0.59	0.12	1.03	5.18	1.03	U
106-93-4	1,2-Dibromoethane	0.33	1.66	0.33	2.64	13.20	2.64	U
127-18-4	Tetrachloroethene	0.33	1.63	0.33	2.29	11.43	2.29	U
108-90-7	Chlorobenzene	0.33	1.63	0.33	1.55	7.76	1.55	U
630-20-6	1,1,1,2-Tetrachloroethane	0.12	0.61	0.12	0.86	4.31	0.86	U
100-41-4	Ethylbenzene	0.33	1.66	1.04	1.49	7.46	4.65	J
108-38-3	m & p-Xylene	0.66	3.30	7.70	2.96	14.78	34.51	
100-42-5	Styrene	0.33	1.65	0.33	1.45	7.27	1.45	U
75-25-2	Bromoform	0.08	0.40	0.08	0.84	4.23	0.84	U
95-47-6	o-Xylene	0.33	1.63	3.22	1.46	7.32	14.44	
79-34-5	1,1,2,2-Tetrachloroethane	0.33	1.63	0.33	2.31	11.56	2.31	U
96-18-4	1,2,3-Trichloropropane	0.14	0.72	0.14	0.90	4.50	0.90	U
103-65-1	n-Propylbenzene	0.22	1.11	1.46	1.12	5.62	7.40	
98-82-8	Isopropylbenzene	0.22	1.12	6.32	1.14	5.69	32.10	
108-67-8	1,3,5-Trimethylbenzene	0.34	1.70	1.87	1.72	8.61	9.48	
98-06-6	tert-butyl benzene	0.20	0.98	0.98	1.11	5.55	5.55	J
95-63-6	1,2,4-Trimethylbenzene	0.33	1.63	7.37	1.66	8.28	37.43	
135-98-8	sec-butylbenzene	0.21	1.04	0.30	1.18	5.91	1.73	J
541-73-1	1,3-Dichlorobenzene	0.33	1.63	0.33	2.03	10.13	2.03	U
99-87-6	Isopropyltoluene	0.20	1.02	0.33	1.16	5.80	1.86	J
100-44-7	Benzyl chloride	0.38	3.76	0.38	2.01	20.12	2.01	U
106-46-7	1,4-Dichlorobenzene	0.65	6.53	0.65	4.05	40.52	4.05	U
104-51-8	n-Butylbenzene	0.38	3.84	1.19	2.18	21.76	6.74	J
95-50-1	1,2-Dichlorobenzene	0.64	6.40	0.64	3.97	39.73	3.97	U
96-12-8	1,2-Dibromo-3-chloropropane	1.07	4.29	1.07	10.70	42.79	10.70	U
120-82-1	1,2,4-Trichlorobenzene	0.66	6.59	0.66	5.05	50.50	5.05	U
87-68-3	Hexachlorobutadiene	0.66	6.59	0.66	7.26	72.60	7.26	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.511		105		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 06

File: 1007006A.D Date Sampled: 02/18/10 Time: 8:14  
Description: STA-3C-5-DUP Date Received: 02/23/10  
Can/Tube#: 369 Date Extracted:  
Sam\_Type: SA Date Analyzed: 03/08/10 Time: 18:57  
QC\_Batch: 030810-MS1 Can Dilution Factor: 1.29 2  
Air Volume: 200 ml Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.34	1.70	0.69	1.73	8.66	3.53	J
74-87-3	Chloromethane	0.33	1.64	1.08	0.70	3.51	2.30	J
75-01-4	Vinyl chloride	0.34	1.68	0.34	0.89	4.43	0.89	U
74-83-9	Bromomethane	0.34	1.68	0.34	1.34	6.72	1.34	U
75-00-3	Chloroethane	0.34	1.68	0.34	0.91	4.57	0.91	U
64-17-5	Ethanol	1.11	5.55	10.28	2.16	10.80	20.02	
75-69-4	Trichlorofluoromethane	0.34	1.68	0.34	1.95	9.73	1.98	J
75-05-8	Acetonitrile	0.66	3.29	0.66	1.14	5.71	1.14	U
67-64-1	Acetone	0.37	7.30	26.68	0.90	17.91	65.45	
4227-05-6	Methyl iodide	0.10	0.48	0.10	0.58	2.92	0.58	U
75-35-4	1,1-Dichloroethene	0.33	1.63	0.33	1.33	6.68	1.33	U
76-13-1	Freon 113	0.33	1.64	0.33	2.60	13.01	2.60	U
75-09-2	Dichloromethane	0.34	1.68	0.34	1.20	6.01	1.20	U
75-15-0	Carbon disulfide	0.28	1.38	3.32	0.89	4.44	10.67	
156-60-5	trans-1,2-Dichloroethene	0.21	4.28	0.21	0.88	17.53	0.88	U
1634-04-4	Methyl tert butyl ether	0.22	4.38	0.22	0.81	16.29	0.81	U
75-34-3	1,1-Dichloroethane	0.33	1.63	0.33	1.36	6.82	1.36	U
108-05-4	Vinyl acetate	0.26	5.22	0.26	0.95	18.97	0.95	U
78-93-3	2-Butanone	0.30	1.51	5.51	0.92	4.60	16.79	
74-97-5	Bromochloromethane	0.16	0.79	0.16	0.86	4.34	0.86	U
78-83-1	Isobutyl alcohol	0.25	4.90	0.25	0.77	15.34	0.77	U
156-59-2	cis-1,2-Dichloroethene	0.33	1.66	0.33	1.36	6.81	1.36	U
594-20-7	2,2-Dichloropropane	0.26	5.28	0.26	1.26	25.21	1.26	U
67-66-3	Chloroform	0.33	1.64	2.29	1.66	8.29	11.56	
71-55-6	1,1,1-Trichloroethane	0.33	1.64	0.33	1.85	9.27	1.85	U
107-06-2	1,2-Dichloroethane	0.33	1.66	0.33	1.39	6.96	1.39	U
563-58-6	1,1-Dichloropropene	0.20	0.98	0.20	0.92	4.60	0.92	U
71-43-2	Benzene	0.33	1.66	2.07	1.10	5.49	6.84	
56-23-5	Carbon tetrachloride	0.33	1.64	0.33	2.14	10.68	2.14	U
142-82-5	n-Heptane	0.18	0.90	0.29	0.76	3.82	1.21	J
78-87-5	1,2-Dichloropropane	0.33	1.66	0.33	1.59	7.94	1.59	U
123-91-1	1,4 Dioxane	0.61	3.03	0.61	2.26	11.28	2.26	U
74-95-3	Dibromomethane	0.11	0.55	0.11	0.82	4.07	0.82	U
79-01-6	Trichloroethene	0.33	1.66	0.33	1.84	9.23	1.84	U
75-27-4	Bromo dichloromethane	0.12	0.60	0.12	0.83	4.15	0.83	U
108-10-1	Methyl Isobutyl Ketone	0.22	1.12	0.53	0.95	4.75	2.26	J
10061-01-5	cis-1,3-Dichloropropene	0.34	1.71	0.34	1.60	8.01	1.60	U
108-88-3	Toluene	0.33	1.66	1.92	1.29	6.47	7.49	
10061-02-6	trans-1,3-Dichloropropene	0.34	1.68	0.34	1.57	7.86	1.57	U
79-00-5	1,1,2-Trichloroethane	0.33	1.64	0.33	1.85	9.27	1.85	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.21	1.05	0.44	0.89	4.45	1.85	J
142-28-9	1,3-Dichloropropane	0.20	0.97	0.20	0.93	4.65	0.93	U
124-48-1	Dibromochloromethane	0.12	0.59	0.12	1.04	5.22	1.04	U
108-93-4	1,2-Dibromoethane	0.34	1.68	0.34	2.66	13.31	2.66	U
127-18-4	Tetrachloroethylene	0.33	1.64	0.33	2.30	11.52	2.30	U
108-90-7	Chlorobenzene	0.33	1.64	0.33	1.56	7.82	1.56	U
630-20-6	1,1,1,2-Tetrachloroethane	0.12	0.61	0.12	0.87	4.34	0.87	U
100-41-4	Ethylbenzene	0.34	1.68	0.34	1.50	7.52	1.50	U
108-38-3	m & p-Xylene	0.66	3.32	1.16	2.98	14.90	5.22	J
100-42-5	Styrene	0.33	1.66	0.33	1.46	7.32	1.46	U
75-25-2	Bromoform	0.08	0.40	0.08	0.85	4.27	0.85	U
95-47-6	o-Xylene	0.33	1.64	0.45	1.48	7.38	2.02	J
79-34-5	1,1,2,2-Tetrachloroethane	0.33	1.64	0.33	2.33	11.65	2.33	U
96-18-4	1,2,3-Trichloropropane	0.15	0.73	0.15	0.91	4.54	0.91	U
103-65-1	n-Propylbenzene	0.22	1.12	0.22	1.13	5.66	1.13	U
98-82-8	Isopropylbenzene	0.23	1.13	0.23	1.15	5.73	1.15	U
108-67-8	1,3,5-Trimethylbenzene	0.34	1.71	0.34	1.74	8.68	1.74	U
98-08-8	tert-butyl benzene	0.20	0.99	0.20	1.11	5.59	1.11	U
95-63-6	1,2,4-Trimethylbenzene	0.33	1.64	0.33	1.67	8.35	1.67	U
135-98-8	sec-butylbenzene	0.21	1.05	0.21	1.19	5.96	1.19	U
541-73-1	1,3-Dichlorobenzene	0.33	1.64	0.33	2.04	10.21	2.04	U
99-87-6	Isopropyltoluene	0.21	1.03	0.21	1.17	5.85	1.17	U
100-44-7	Benzyl chloride	0.38	3.79	0.38	2.03	20.28	2.03	U
106-46-7	1,4-Dichlorobenzene	0.66	6.58	0.66	4.08	40.84	4.08	U
104-51-8	n-Butylbenzene	0.39	3.87	0.39	2.19	21.93	2.19	U
95-50-1	1,2-Dichlorobenzene	0.65	6.45	0.65	4.00	40.04	4.00	U
96-12-8	1,2-Dibromo-3-chloropropane	1.08	4.32	1.08	10.78	43.12	10.78	U
120-82-1	1,2,4-Trichlorobenzene	0.66	6.64	0.66	5.09	50.89	5.09	U
87-68-3	Hexachlorobutadiene	0.66	6.64	0.66	7.32	73.17	7.32	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		13.457		135	70-130	*

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23 68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 07

File: 1007007A.D Date Sampled: 02/18/10 Time: 8:50  
Description: STA-3C-10-REP Date Received: 02/23/10  
Can/Tube#: 371 Date Extracted:  
Sam\_Type: SA Date Analyzed: 03/08/10 Time: 19:42  
QC\_Batch: 030810-MS1 Can Dilution Factor: 1.41 2  
Air Volume: 200 ml Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.37	1.85	0.51	1.89	9.47	2.62	J
74-87-3	Chloromethane	0.36	1.80	0.77	0.77	3.83	1.64	J
75-01-4	Vinyl chloride	0.37	1.83	0.37	0.97	4.84	0.97	U
74-83-9	Bromomethane	0.37	1.83	0.37	1.47	7.35	1.47	U
75-00-3	Chloroethane	0.37	1.83	0.37	1.00	4.99	1.00	U
64-17-5	Ethanol	1.21	6.06	1.21	2.36	11.80	2.36	U
75-69-4	Trichlorofluoromethane	0.37	1.83	0.37	2.13	10.64	2.13	U
75-05-8	Acetonitrile	0.72	3.60	0.72	1.25	6.24	1.25	U
67-64-1	Acetone	0.40	7.98	2.41	0.98	19.58	5.92	J
4227-95-6	Methyl iodide	0.11	0.53	0.11	0.64	3.19	0.64	U
75-35-4	1,1-Dichloroethene	0.36	1.78	0.36	1.46	7.30	1.46	U
76-13-1	Freon 113	0.36	1.80	0.36	2.84	14.22	2.84	U
75-09-2	Dichloromethane	0.37	1.83	0.37	1.31	6.57	1.31	U
75-15-0	Carbon disulfide	0.30	1.51	0.30	0.97	4.85	0.97	U
156-60-5	trans-1,2-Dichloroethene	0.23	4.68	0.23	0.96	19.16	0.96	U
1634-04-4	Methyl tert butyl ether	0.24	4.79	0.42	0.89	17.81	1.57	J
75-34-3	1,1-Dichloroethane	0.36	1.78	0.36	1.49	7.46	1.49	U
108-05-4	Vinyl acetate	0.29	5.70	0.29	1.04	20.74	1.04	U
78-93-3	2-Butanone	0.33	1.65	0.33	1.01	5.02	1.01	U
74-97-5	Bromochloromethane	0.17	0.87	0.17	0.94	4.74	0.94	U
78-83-1	Isobutyl alcohol	0.27	5.36	0.27	0.84	16.77	0.84	U
156-59-2	cis-1,2-Dichloroethene	0.36	1.82	0.36	1.49	7.44	1.49	U
594-20-7	2,2-Dichloropropane	0.29	5.77	0.29	1.38	27.55	1.38	U
67-66-3	Chloroform	0.36	1.80	0.42	1.81	9.06	2.11	J
71-55-6	1,1,1-Trichloroethane	0.36	1.80	0.36	2.03	10.13	2.03	U
107-06-2	1,2-Dichloroethane	0.36	1.82	0.36	1.52	7.60	1.52	U
563-58-6	1,1-Dichloropropene	0.21	1.07	0.21	1.00	5.02	1.00	U
71-43-2	Benzene	0.36	1.82	0.71	1.20	6.00	2.35	J
56-23-5	Carbon tetrachloride	0.36	1.80	0.36	2.34	11.68	2.34	U
142-82-5	n-Heptane	0.20	0.99	0.20	0.83	4.18	0.83	U
78-87-5	1,2-Dichloropropane	0.36	1.82	0.36	1.73	8.68	1.73	U
123-91-1	1,4 Dioxane	0.66	3.31	0.66	2.47	12.33	2.47	U
74-95-3	Dibromomethane	0.12	0.61	0.12	0.90	4.45	0.90	U
79-01-6	Trichloroethene	0.36	1.82	0.36	2.01	10.09	2.01	U
75-27-4	Bromodichloromethane	0.13	0.66	0.13	0.90	4.54	0.90	U
108-10-1	Methyl Isobutyl Ketone	0.25	1.23	0.25	1.04	5.19	1.04	U
10061-01-5	cis-1,3-Dichloropropene	0.37	1.87	0.37	1.75	8.76	1.75	U
108-88-3	Toluene	0.36	1.82	0.36	1.41	7.07	1.41	U
10061-02-6	trans-1,3-Dichloropropene	0.37	1.83	0.37	1.72	8.59	1.72	U
79-00-5	1,1,2-Trichloroethane	0.36	1.80	0.36	2.03	10.13	2.03	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.23	1.15	0.23	0.97	4.86	0.97	U
142-28-9	1,3-Dichloropropane	0.21	1.06	0.21	1.02	5.08	1.02	U
124-48-1	Dibromochloromethane	0.13	0.65	0.13	1.14	5.71	1.14	U
106-93-4	1,2-Dibromoethane	0.37	1.83	0.37	2.91	14.54	2.91	U
127-18-4	Tetrachloroethylene	0.36	1.80	0.36	2.52	12.59	2.52	U
108-90-7	Chlorobenzene	0.36	1.80	0.36	1.71	8.55	1.71	U
630-20-6	1,1,1,2-Tetrachloroethane	0.13	0.67	0.13	0.95	4.75	0.95	U
100-41-4	Ethylbenzene	0.37	1.83	0.37	1.64	8.22	1.64	U
108-38-3	m & p-Xylene	0.73	3.63	0.73	3.26	16.28	3.28	U
100-42-5	Styrene	0.36	1.82	0.36	1.60	8.00	1.60	U
75-25-2	Bromoform	0.09	0.44	0.09	0.93	4.66	0.93	U
95-47-6	o-Xylene	0.36	1.80	0.36	1.61	8.06	1.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.36	1.80	0.36	2.55	12.74	2.55	U
96-18-4	1,2,3-Trichloropropane	0.16	0.80	0.16	0.99	4.96	0.99	U
103-65-1	n-Propylbenzene	0.24	1.22	0.24	1.23	6.19	1.23	U
98-82-8	Isopropylbenzene	0.25	1.23	0.25	1.25	6.26	1.25	U
108-67-8	1,3,5-Trimethylbenzene	0.37	1.87	0.37	1.90	9.48	1.90	U
98-06-6	tert-butyl benzene	0.22	1.08	0.22	1.22	6.11	1.22	U
95-63-6	1,2,4-Trimethylbenzene	0.36	1.80	0.36	1.83	9.13	1.83	U
135-98-8	sec-butylbenzene	0.23	1.15	0.23	1.30	6.51	1.30	U
541-73-1	1,3-Dichlorobenzene	0.36	1.80	0.36	2.23	11.16	2.23	U
99-87-6	Isopropyltoluene	0.23	1.13	0.23	1.28	6.39	1.28	U
100-44-7	Benzyl chloride	0.41	4.15	0.41	2.22	22.16	2.22	U
106-46-7	1,4-Dichlorobenzene	0.72	7.19	0.72	4.46	44.64	4.46	U
104-51-8	n-Butylbenzene	0.42	4.23	0.42	2.40	23.97	2.40	U
95-50-1	1,2-Dichlorobenzene	0.71	7.05	0.71	4.38	43.76	4.38	U
96-12-8	1,2-Dibromo-3-chloropropane	1.18	4.72	1.18	11.78	47.14	11.78	U
120-82-1	1,2,4-Trichlorobenzene	0.73	7.26	0.73	5.56	55.63	5.56	U
87-68-3	Hexachlorobutadiene	0.73	7.26	0.73	8.00	79.97	8.00	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		13.183		132		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 08

File: 1007008A.D

Date Sampled: 02/18/10 Time: 8:50

Description: STA-3C-10-DUP

Date Received: 02/23/10

Can/Tube#: 351

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/09/10

QC\_Batch: 030910-MS1

Can Dilution Factor: 1.36

Air Volume: 200 ml

Not Detected Flag:

Time: 15:45

U 2

U

J

J

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.22	1.11	0.55	0.94	4.69	2.33	J
142-28-9	1,3-Dichloropropane	0.21	1.03	0.21	0.98	4.90	0.98	U
124-48-1	Dibromochloromethane	0.12	0.63	0.12	1.10	5.50	1.10	U
106-93-4	1,2-Dibromoethane	0.35	1.77	0.35	2.81	14.03	2.81	U
127-18-4	Tetrachloroethene	0.35	1.73	1.48	2.43	12.14	10.33	J
108-90-7	Chlorobenzene	0.35	1.73	0.35	1.65	8.25	1.65	U
630-20-6	1,1,1,2-Tetrachloroethane	0.13	0.85	0.13	0.92	4.58	0.92	U
100-41-4	Ethylbenzene	0.35	1.77	0.35	1.59	7.93	1.59	U
108-38-3	m & p-Xylene	0.70	3.50	0.80	3.14	15.71	3.58	J
100-42-5	Styrene	0.35	1.75	0.35	1.54	7.72	1.54	U
75-25-2	Bromoform	0.08	0.42	0.08	0.90	4.50	0.90	U
95-47-6	o-Xylene	0.35	1.73	0.35	1.56	7.78	1.56	U
79-34-5	1,1,2,2-Tetrachloroethane	0.35	1.73	0.35	2.46	12.29	2.46	U
96-18-4	1,2,3-Trichloropropane	0.15	0.77	0.15	0.96	4.78	0.96	U
103-65-1	n-Propylbenzene	0.23	1.18	0.23	1.19	5.97	1.19	U
98-82-8	Isopropylbenzene	0.24	1.19	0.24	1.21	6.04	1.21	U
108-87-8	1,3,5-Trimethylbenzene	0.36	1.80	0.36	1.83	9.15	1.83	U
98-06-6	tert-butyl benzene	0.21	1.04	0.21	1.18	5.90	1.18	U
95-63-6	1,2,4-Trimethylbenzene	0.35	1.73	0.35	1.76	8.80	1.76	U
135-98-8	sec-butylbenzene	0.22	1.11	0.22	1.25	6.28	1.25	U
541-73-1	1,3-Dichlorobenzene	0.35	1.73	0.35	2.15	10.76	2.15	U
99-87-6	Isopropyltoluene	0.22	1.09	0.22	1.23	6.17	1.23	U
100-44-7	Benzyl chloride	0.40	4.00	0.40	2.14	21.38	2.14	U
106-46-7	1,4-Dichlorobenzene	0.69	6.94	0.69	4.31	43.06	4.31	U
104-51-8	n-Butylbenzene	0.41	4.08	0.41	2.31	23.12	2.31	U
95-50-1	1,2-Dichlorobenzene	0.68	6.80	0.68	4.22	42.21	4.22	U
96-12-8	1,2-Dibromo-3-chloropropane	1.14	4.56	1.14	11.37	45.46	11.37	U
120-82-1	1,2,4-Trichlorobenzene	0.70	7.00	0.80	5.37	53.65	6.11	J
87-68-3	Hexachlorobutadiene	0.70	7.00	0.70	7.71	77.14	7.71	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag ^ = Out
Toluene-d8		10.000		10.954		110		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 09

File: 1007009A.D	Date Sampled: 02/18/10	Time: 11:00
Description: STA-3N-5	Date Received: 02/23/10	
Can/Tube#: 346	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 19:29
QC_Batch: 031410-MS1	Can Dilution Factor: 1.42	2
Air Volume: 100 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.75	3.73	0.75	3.81	19.07	3.81	U
74-87-3	Chloromethane	0.72	3.62	0.72	1.54	7.72	1.54	U
75-01-4	Vinyl chloride	0.74	3.69	0.74	1.95	9.74	1.95	U
74-83-9	Bromomethane	0.74	3.69	0.74	2.96	14.80	2.98	U
75-00-3	Chloroethane	0.74	3.69	0.74	2.01	10.06	2.01	U
64-17-5	Ethanol	2.44	12.21	3.91	4.75	23.77	7.61	J
75-69-4	Trichlorofluoromethane	0.74	3.69	0.74	4.28	21.42	4.28	U
75-05-8	Acetonitrile	1.45	7.24	1.45	2.51	12.57	2.51	U
67-64-1	Acetone	0.80	16.07	36.42	1.97	39.44	89.36	
4227-95-6	Methyl iodide	0.21	1.07	0.21	1.29	6.43	1.29	U
75-35-4	1,1-Dichloroethene	0.72	3.59	0.72	2.93	14.70	2.93	U
76-13-1	Freon 113	0.72	3.62	0.72	5.73	28.64	5.73	U
75-09-2	Dichloromethane	0.74	3.69	0.74	2.65	13.24	2.65	U
75-15-0	Carbon disulfide	0.61	3.04	0.61	1.95	9.77	1.95	U
156-60-5	trans-1,2-Dichloroethene	0.47	9.43	0.47	1.93	38.58	1.93	U
1634-04-4	Methyl tert butyl ether	0.48	9.64	0.48	1.79	35.87	1.79	U
75-34-3	1,1-Dichloroethane	0.72	3.59	0.72	3.00	15.02	3.00	U
108-05-4	Vinyl acetate	0.57	11.49	0.57	2.09	41.77	2.09	U
78-93-3	2-Butanone	0.67	3.32	9.03	2.03	10.12	27.49	
74-97-5	Bromochloromethane	0.35	1.75	0.35	1.90	9.54	1.90	U
78-83-1	Isobutyl alcohol	0.54	10.79	0.54	1.69	33.77	1.69	U
156-59-2	cis-1,2-Dichloroethene	0.73	3.66	0.73	2.99	14.99	2.99	U
594-20-7	2,2-Dichloropropane	0.58	11.63	0.58	2.77	55.50	2.77	U
67-66-3	Chloroform	0.72	3.62	251.03	3.65	18.26	1,265.77	
71-55-6	1,1,1-Trichloroethane	0.72	3.62	0.72	4.08	20.40	4.08	U
107-06-2	1,2-Dichloroethane	0.73	3.66	0.73	3.06	15.32	3.06	U
563-58-6	1,1-Dichloropropene	0.43	2.16	0.43	2.02	10.12	2.02	U
71-43-2	Benzene	0.73	3.66	1.39	2.41	12.08	4.59	J
56-23-5	Carbon tetrachloride	0.72	3.62	4.35	4.70	23.52	28.23	
142-82-5	n-Heptane	0.40	1.99	2.15	1.68	8.41	9.12	
78-87-5	1,2-Dichloropropane	0.73	3.66	0.73	3.49	17.48	3.49	U
123-91-1	1,4 Dioxane	1.33	6.67	1.33	4.97	24.83	4.97	U
74-95-3	Dibromomethane	0.25	1.22	0.25	1.80	8.96	1.80	U
79-01-6	Trichloroethene	0.73	3.66	0.73	4.08	20.33	4.06	U
75-27-4	Bromodichloromethane	0.26	1.32	0.26	1.82	9.13	1.82	U
108-10-1	Methyl Isobutyl Ketone	0.49	2.47	0.49	2.09	10.45	2.09	U
10061-01-5	cis-1,3-Dichloropropene	0.75	3.76	0.75	3.53	17.64	3.53	U
108-88-3	Toluene	0.73	3.66	16.12	2.84	14.25	62.68	
10061-02-6	trans-1,3-Dichloropropene	0.74	3.69	0.74	3.46	17.31	3.46	U
79-00-5	1,1,2-Trichloroethane	0.72	3.62	0.72	4.08	20.40	4.08	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.46	2.31	0.46	1.98	9.79	1.98	U
142-28-9	1,3-Dichloropropane	0.43	2.14	0.43	2.05	10.23	2.05	U
124-48-1	Dibromochloromethane	0.26	1.31	0.26	2.29	11.49	2.29	U
106-93-4	1,2-Dibromoethane	0.74	3.69	0.74	5.86	29.30	5.86	U
127-18-4	Tetrachloroethene	0.72	3.62	0.72	5.07	25.35	5.07	U
108-90-7	Chlorobenzene	0.72	3.62	0.72	3.44	17.22	3.44	U
630-20-6	1,1,1,2-Tetrachloroethane	0.27	1.35	0.27	1.92	9.56	1.92	U
100-41-4	Ethylbenzene	0.74	3.69	1.05	3.31	16.56	4.71	J
108-38-3	m & p-Xylene	1.48	7.31	6.47	6.56	32.80	29.02	J
100-42-5	Styrene	0.73	3.66	0.73	3.22	16.12	3.22	U
75-25-2	Bromoform	0.18	0.88	0.18	1.87	9.40	1.87	U
95-47-6	o-Xylene	0.72	3.62	2.62	3.25	16.24	11.73	J
79-34-5	1,1,2,2-Tetrachloroethane	0.72	3.62	0.72	5.13	25.66	5.13	U
96-18-4	1,2,3-Trichloropropane	0.32	1.60	0.32	2.00	9.99	2.00	U
103-65-1	n-Propylbenzene	0.49	2.48	0.49	2.49	12.47	2.49	U
98-82-8	Isopropylbenzene	0.50	2.49	2.87	2.52	12.61	14.56	
108-87-8	1,3,5-Trimethylbenzene	0.75	3.76	1.14	3.82	19.10	5.79	J
98-06-6	tert-butyl benzene	0.43	2.17	0.58	2.45	12.31	3.28	J
95-63-6	1,2,4-Trimethylbenzene	0.72	3.62	3.91	3.68	18.38	19.86	
135-98-8	sec-butylbenzene	0.46	2.31	0.48	2.62	13.12	2.62	U
541-73-1	1,3-Dichlorobenzene	0.72	3.62	0.72	4.50	22.48	4.50	U
99-87-6	Isopropyltoluene	0.45	2.27	0.45	2.58	12.88	2.58	U
100-44-7	Benzyl chloride	0.83	8.35	0.83	4.46	44.64	4.46	U
106-46-7	1,4-Dichlorobenzene	1.45	14.48	1.45	8.99	89.91	8.99	U
104-51-8	n-Butylbenzene	0.85	8.52	0.85	4.83	48.28	4.83	U
95-50-1	1,2-Dichlorobenzene	1.42	14.20	1.42	8.82	88.15	8.82	U
96-12-8	1,2-Dibromo-3-chloropropane	2.38	9.51	2.38	23.73	94.94	23.73	U
120-82-1	1,2,4-Trichlorobenzene	1.46	14.63	1.46	11.20	112.04	11.20	U
87-68-3	Hexachlorobutadiene	1.46	14.63	1.46	16.11	161.08	16.11	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.289		103		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 10

File: 1007010A.D

Date Sampled: 02/18/10 Time: 11:59

Description: STA-3N-10

Date Received: 02/23/10

Can/Tube#: 352

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/15/10

QC\_Batch: 031510-MS1

Time: 13:19

Air Volume: 20 ml

Can Dilution Factor: 1.63 2

Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	4.28	21.43	4.28	21.85	109.44	21.85	U
74-87-3	Chloromethane	4.16	20.78	4.16	8.86	44.32	8.86	U
75-01-4	Vinyl chloride	4.24	21.19	4.24	11.19	55.93	11.19	U
74-83-9	Bromomethane	4.24	21.19	4.24	16.98	84.92	16.98	U
75-00-3	Chloroethane	4.24	21.19	4.24	11.54	57.72	11.54	U
64-17-5	Ethanol	14.02	70.09	26.79	27.29	136.45	52.16	J
75-69-4	Trichlorofluoromethane	4.24	21.19	4.24	24.59	122.95	24.59	U
75-05-8	Acetonitrile	8.31	41.57	8.31	14.43	72.14	14.43	U
67-64-1	Acetone	4.61	92.26	242.87	11.32	226.36	595.89	
4227-95-6	Methyl iodide	1.22	6.11	1.22	7.38	36.89	7.38	U
75-35-4	1,1-Dichloroethene	4.12	20.62	4.12	16.84	84.38	16.84	U
76-13-1	Freon 113	4.18	20.78	4.16	32.88	164.38	32.88	U
75-09-2	Dichloromethane	4.24	21.19	4.24	15.19	75.97	15.19	U
75-15-0	Carbon disulfide	3.48	17.44	4.15	11.20	56.05	13.33	J
156-60-5	trans-1,2-Dichloroethene	2.71	54.12	2.71	11.07	221.45	11.07	U
1634-04-4	Methyl tert butyl ether	2.77	55.34	2.77	10.29	205.88	10.29	U
75-34-3	1,1-Dichloroethane	4.12	20.62	4.12	17.21	86.20	17.21	U
108-05-4	Vinyl acetate	3.30	65.93	3.30	11.99	239.73	11.99	U
78-93-3	2-Butanone	3.82	19.07	101.80	11.63	58.07	309.96	
74-97-5	Bromochloromethane	2.00	10.02	2.00	10.91	54.78	10.91	U
78-83-1	Isobutyl alcohol	3.10	61.94	3.10	9.69	193.82	9.69	U
156-59-2	cis-1,2-Dichloroethene	4.20	21.03	4.20	17.18	86.04	17.18	U
594-20-7	2,2-Dichloropropane	3.34	66.75	3.34	15.93	318.52	15.93	U
67-66-3	Chloroform	4.16	20.78	532.64	20.96	104.79	2,685.70	
71-55-6	1,1,1-Trichloroethane	4.16	20.78	4.16	23.42	117.08	23.42	U
107-06-2	1,2-Dichloroethane	4.20	21.03	4.20	17.55	87.91	17.55	U
563-58-6	1,1-Dichloropropene	2.47	12.39	2.47	11.58	58.07	11.58	U
71-43-2	Benzene	4.20	21.03	4.96	13.84	69.35	16.36	J
56-23-5	Carbon tetrachloride	4.16	20.78	7.01	27.00	134.98	45.53	J
142-82-5	n-Heptane	2.27	11.41	6.07	9.62	48.28	25.70	J
78-87-5	1,2-Dichloropropane	4.20	21.03	4.20	20.03	100.34	20.03	U
123-91-1	1,4 Dioxane	7.66	38.31	7.66	28.50	142.51	28.50	U
74-95-3	Dibromomethane	1.41	7.01	1.41	10.35	51.44	10.35	U
79-01-6	Trichloroethene	4.20	21.03	4.20	23.29	116.68	23.29	U
75-27-4	Bromodichloromethane	1.51	7.58	1.51	10.43	52.43	10.43	U
108-10-1	Methyl Isobutyl Ketone	2.84	14.18	2.84	12.00	60.01	12.00	U
10061-01-5	cis-1,3-Dichloropropene	4.32	21.60	4.32	20.25	101.24	20.25	U
108-88-3	Toluene	4.20	21.03	11.54	16.32	81.78	44.89	J
10061-02-6	trans-1,3-Dichloropropene	4.24	21.19	4.24	19.87	99.33	19.87	U
79-00-5	1,1,2-Trichloroethane	4.16	20.78	4.16	23.42	117.08	23.42	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	2.66	13.28	9.76	11.26	56.21	41.29	J
142-28-9	1,3-Dichloropropane	2.47	12.31	2.47	11.76	58.73	11.76	U
124-48-1	Dibromochloromethane	1.50	7.50	1.50	13.16	65.96	13.16	U
106-93-4	1,2-Dibromoethane	4.24	21.19	4.24	33.63	168.14	33.63	U
127-18-4	Tetrachloroethene	4.16	20.78	4.16	29.10	145.51	29.10	U
108-90-7	Chlorobenzene	4.16	20.78	4.16	19.76	98.82	19.76	U
630-20-6	1,1,1,2-Tetrachloroethane	1.55	7.74	1.55	11.00	54.86	11.00	U
100-41-4	Ethylbenzene	4.24	21.19	4.24	19.01	95.03	19.01	U
108-38-3	m & p-Xylene	8.39	41.97	8.46	37.65	188.24	37.92	J
100-42-5	Styrene	4.20	21.03	4.20	18.47	92.53	18.47	U
75-25-2	Bromoform	1.01	5.05	1.01	10.74	53.92	10.74	U
95-47-6	o-Xylene	4.16	20.78	4.16	18.64	93.21	18.64	U
79-34-5	1,1,2,2-Tetrachloroethane	4.16	20.78	4.16	29.45	147.27	29.45	U
96-18-4	1,2,3-Trichloropropane	1.85	9.21	1.85	11.49	57.33	11.49	U
103-65-1	n-Propylbenzene	2.81	14.10	2.81	14.27	71.57	14.27	U
98-82-8	Isopropylbenzene	2.85	14.26	2.85	14.48	72.40	14.48	U
108-67-8	1,3,5-Trimethylbenzene	4.32	21.60	4.32	21.93	109.63	21.93	U
98-06-6	tert-butyl benzene	2.49	12.47	2.49	14.09	70.67	14.09	U
95-63-6	1,2,4-Trimethylbenzene	4.16	20.78	4.16	21.10	105.49	21.10	U
135-98-8	sec-butylbenzene	2.65	13.28	2.65	15.01	75.29	15.01	U
541-73-1	1,3-Dichlorobenzene	4.16	20.78	4.16	25.80	129.01	25.80	U
99-87-6	Isopropyltoluene	2.61	13.04	2.61	14.78	73.90	14.78	U
100-44-7	Benzyl chloride	4.79	47.92	4.79	25.62	256.20	25.62	U
106-46-7	1,4-Dichlorobenzene	8.31	83.13	8.31	51.61	516.05	51.61	U
104-51-8	n-Butylbenzene	4.89	48.90	4.89	27.71	277.13	27.71	U
95-50-1	1,2-Dichlorobenzene	8.15	81.50	8.15	50.59	505.93	50.59	U
96-12-8	1,2-Dibromo-3-chloropropane	13.65	54.61	13.65	136.22	544.90	136.22	U
120-82-1	1,2,4-Trichlorobenzene	8.39	83.95	8.39	64.31	643.06	64.31	U
87-68-3	Hexachlorobutadiene	8.39	83.95	8.39	92.45	924.53	92.45	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		% Rec.		*	= Out	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 11

File: 1007011A.D	Date Sampled: 02/18/10	Time: 12:58
Description: STA-3E-5	Date Received: 02/23/10	
Can/Tube#: 324	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 18:03
QC_Batch: 031410-MS1	Can Dilution Factor: 1.64	2
Air Volume: 100 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.86	4.31	0.86	4.40	22.02	4.40	U
74-87-3	Chloromethane	0.84	4.18	1.74	1.78	8.92	3.72	J
75-01-4	Vinyl chloride	0.85	4.26	0.85	2.25	11.25	2.25	U
74-83-9	Bromomethane	0.85	4.26	0.85	3.42	17.09	3.42	U
75-00-3	Chloroethane	0.85	4.26	0.85	2.32	11.61	2.32	U
64-17-5	Ethanol	2.82	14.10	18.56	5.49	27.46	36.13	
75-69-4	Trichlorofluoromethane	0.85	4.26	0.85	4.95	24.74	4.95	U
75-05-8	Acetonitrile	1.67	8.36	1.67	2.90	14.52	2.90	U
67-64-1	Acetone	0.93	18.56	60.17	2.28	45.55	147.63	
4227-95-6	Methyl iodide	0.25	1.23	0.25	1.48	7.42	1.48	U
75-35-4	1,1-Dichloroethene	0.83	4.15	0.83	3.39	16.98	3.39	U
76-13-1	Freon 113	0.84	4.18	0.84	6.62	33.08	6.62	U
75-09-2	Dichloromethane	0.85	4.26	0.85	3.06	15.29	3.06	U
75-15-0	Carbon disulfide	0.70	3.51	0.70	2.25	11.28	2.25	U
156-60-5	trans-1,2-Dichloroethene	0.54	10.89	0.54	2.23	44.56	2.23	U
1634-04-4	Methyl tert butyl ether	0.56	11.14	0.56	2.07	41.43	2.07	U
75-34-3	1,1-Dichloroethane	0.83	4.15	0.83	3.46	17.35	3.46	U
108-05-4	Vinyl acetate	0.66	13.27	0.66	2.41	48.24	2.41	U
78-93-3	2-Butanone	0.77	3.84	12.82	2.34	11.68	39.04	
74-97-5	Bromochloromethane	0.40	2.02	0.40	2.20	11.02	2.20	U
78-83-1	Isobutyl alcohol	0.62	12.46	0.62	1.95	39.00	1.95	U
156-59-2	cis-1,2-Dichloroethene	0.84	4.23	0.84	3.46	17.31	3.46	U
594-20-7	2,2-Dichloropropane	0.67	13.43	0.67	3.20	64.10	3.20	U
67-66-3	Chloroform	0.84	4.18	91.69	4.22	21.09	462.33	
71-55-6	1,1,1-Trichloroethane	0.84	4.18	0.84	4.71	23.56	4.71	U
107-06-2	1,2-Dichloroethane	0.84	4.23	0.84	3.53	17.69	3.53	U
563-58-6	1,1-Dichloropropene	0.50	2.49	0.50	2.33	11.69	2.33	U
71-43-2	Benzene	0.84	4.23	0.86	2.79	13.96	2.84	J
56-23-5	Carbon tetrachlorido	0.84	4.18	1.14	5.43	27.16	7.38	J
142-82-5	n-Heptane	0.46	2.30	2.72	1.94	9.72	11.51	
78-87-5	1,2-Dichloropropane	0.84	4.23	0.84	4.03	20.19	4.03	U
123-91-1	1,4 Dioxane	1.54	7.71	1.54	5.74	28.68	5.74	U
74-95-3	Dibromomethane	0.28	1.41	0.28	2.08	10.35	2.08	U
79-01-6	Trichloroethene	0.84	4.23	0.84	4.69	23.48	4.69	U
75-27-4	Bromodichloromethane	0.30	1.53	0.30	2.10	10.55	2.10	U
108-10-1	Methyl Isobutyl Ketone	0.57	2.85	0.57	2.41	12.07	2.41	U
10061-01-5	cis-1,3-Dichloropropene	0.87	4.35	0.87	4.07	20.37	4.07	U
108-88-3	Toluene	0.84	4.23	4.19	3.28	16.46	16.30	J
10061-02-6	trans-1,3-Dichloropropene	0.85	4.26	0.85	4.00	19.99	4.00	U
79-00-5	1,1,2-Trichloroethane	0.84	4.18	0.84	4.71	23.56	4.71	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.54	2.67	0.54	2.27	11.31	2.27	U
142-28-9	1,3-Dichloropropane	0.50	2.48	0.50	2.37	11.82	2.37	U
124-48-1	Dibromochloromethane	0.30	1.51	0.30	2.65	13.27	2.65	U
106-93-4	1,2-Dibromoethane	0.85	4.26	0.85	8.77	33.83	6.77	U
127-18-4	Tetrachloroethene	0.84	4.18	0.84	5.86	29.28	5.86	U
108-90-7	Chlorobenzene	0.84	4.18	0.84	3.98	19.89	3.98	U
630-20-6	1,1,1,2-Tetrachloroethane	0.31	1.56	0.31	2.21	11.04	2.21	U
100-41-4	Ethylbenzene	0.85	4.26	0.85	3.82	19.12	3.82	U
108-38-3	m & p-Xylene	1.69	8.45	1.69	7.58	37.88	7.58	U
100-42-5	Styrene	0.84	4.23	0.84	3.72	18.62	3.72	U
75-25-2	Bromoform	0.20	1.02	0.20	2.16	10.85	2.16	U
95-47-6	o-Xylene	0.84	4.18	0.84	3.75	18.76	3.75	U
79-34-5	1,1,2,2-Tetrachloroethane	0.84	4.18	0.84	5.93	29.63	5.93	U
96-18-4	1,2,3-Trichloropropane	0.37	1.85	0.37	2.31	11.54	2.31	U
103-65-1	n-Propylbenzene	0.57	2.84	0.57	2.87	14.40	2.87	U
98-82-8	Isopropylbenzene	0.57	2.87	0.57	2.91	14.57	2.91	U
108-67-8	1,3,5-Trimethylbenzene	0.87	4.35	0.87	4.41	22.06	4.41	U
98-06-6	tert-butyl benzene	0.50	2.51	0.50	2.83	14.22	2.83	U
95-63-6	1,2,4-Trimethylbenzene	0.84	4.18	0.84	4.25	21.23	4.25	U
135-98-8	sec-butylbenzene	0.53	2.67	0.53	3.02	15.15	3.02	U
541-73-1	1,3-Dichlorobenzene	0.84	4.18	0.84	5.19	25.96	5.19	U
99-87-6	Iscropropyltoluene	0.52	2.62	0.52	2.97	14.87	2.97	U
100-44-7	Benzyl chloride	0.98	9.64	0.98	5.16	51.56	5.16	U
106-46-7	1,4-Dichlorobenzene	1.67	16.73	1.67	10.38	103.84	10.38	U
104-51-8	n-Butylbenzene	0.98	9.84	0.98	5.58	55.77	5.58	U
95-50-1	1,2-Dichlorobenzene	1.64	16.40	1.64	10.18	101.81	10.18	U
96-12-8	1,2-Dibromo-3-chloropropane	2.75	10.99	2.75	27.41	109.65	27.41	U
120-82-1	1,2,4-Trichlorobenzene	1.69	16.89	1.69	12.94	129.40	12.94	U
87-68-3	Hexachlorobutadiene	1.69	16.89	1.69	18.60	186.04	18.60	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag	
Toluene-d8		10.000		% Rec.		Limits	*	= Out
						94	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 12

File: 1007012A.D	Date Sampled: 02/18/10	Time: 13:20
Description: STA-3E-10	Date Received: 02/23/10	
Can/Tube#: 301	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 17:19
QC_Batch: 031410-MS1	Can Dilution Factor: 1.68	2
Air Volume: 100 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.88	4.42	0.88	4.50	22.56	4.50	U
74-87-3	Chloromethane	0.86	4.28	39.20	1.83	9.14	83.60	
75-01-4	Vinyl chloride	0.87	4.37	0.87	2.31	11.53	2.31	U
74-83-9	Bromomethane	0.87	4.37	0.87	3.50	17.51	3.50	U
75-00-3	Chloroethane	0.87	4.37	2.61	2.38	11.90	7.10	J
64-17-5	Ethanol	2.89	14.45	89.24	5.63	28.13	173.73	
75-69-4	Trichlorofluoromethane	0.87	4.37	0.87	5.07	25.34	5.07	U
75-05-8	Acetonitrile	1.71	8.57	1.71	2.97	14.87	2.97	U
67-64-1	Acetone	0.95	19.02	63.67	2.33	46.66	156.22	
4227-95-6	Methyl iodide	0.25	1.26	0.25	1.52	7.60	1.52	U
75-35-4	1,1-Dichloroethene	0.85	4.25	0.85	3.47	17.39	3.47	U
76-13-1	Freon 113	0.86	4.28	0.86	6.78	33.88	6.78	U
75-09-2	Dichloromethane	0.87	4.37	1.43	3.13	15.66	5.12	J
75-15-0	Carbon disulfide	0.72	3.60	1.83	2.31	11.55	5.88	J
156-60-5	trans-1,2-Dichloroethene	0.56	11.16	0.56	2.28	45.65	2.28	U
1634-04-4	Methyl tert butyl ether	0.57	11.41	0.57	2.12	42.44	2.12	U
75-34-3	1,1-Dichloroethane	0.85	4.25	0.85	3.55	17.77	3.55	U
108-05-4	Vinyl acetate	0.68	13.59	0.68	2.47	49.42	2.47	U
78-93-3	2-Butanone	0.79	3.93	12.10	2.40	11.97	36.83	
74-97-5	Bromochloromethane	0.41	2.07	0.41	2.25	11.29	2.25	U
78-83-1	Isobutyl alcohol	0.64	12.77	0.64	2.00	39.95	2.00	U
156-59-2	cis-1,2-Dichloroethene	0.87	4.33	0.87	3.54	17.74	3.54	U
594-20-7	2,2-Dichloropropane	0.69	13.76	0.69	3.28	65.66	3.28	U
67-66-3	Chloroform	0.86	4.28	243.80	4.32	21.60	1,229.27	
71-55-6	1,1,1-Trichloroethane	0.86	4.28	0.86	4.83	24.13	4.83	U
107-06-2	1,2-Dichloroethane	0.87	4.33	1.61	3.62	18.12	6.74	J
563-58-6	1,1-Dichloropropene	0.51	2.55	0.51	2.39	11.97	2.39	U
71-43-2	Benzene	0.87	4.33	1.35	2.85	14.30	4.44	J
56-23-5	Carbon tetrachloride	0.86	4.28	4.46	5.56	27.82	28.95	
142-82-5	n-Heptane	0.47	2.35	3.48	1.98	9.95	14.71	
78-87-5	1,2-Dichloropropane	0.87	4.33	0.87	4.13	20.68	4.13	U
123-91-1	1,4 Dioxane	1.58	7.90	1.58	5.88	29.38	5.88	U
74-95-3	Dibromomethane	0.29	1.44	0.29	2.13	10.60	2.13	U
79-01-6	Trichloroethene	0.87	4.33	0.87	4.80	24.05	4.80	U
75-27-4	Bromodichloromethane	0.31	1.56	1.39	2.15	10.81	9.61	J
108-10-1	Methyl Isobutyl Ketone	0.58	2.92	0.58	2.47	12.37	2.47	U
10061-01-5	cis-1,3-Dichloropropene	0.89	4.45	0.89	4.17	20.87	4.17	U
108-88-3	Toluene	0.87	4.33	1.65	3.37	16.86	6.41	J
10061-02-6	trans-1,3-Dichloropropene	0.87	4.37	0.87	4.10	20.48	4.10	U
79-00-5	1,1,2-Trichloroethane	0.86	4.28	0.86	4.83	24.13	4.83	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.55	2.74	0.55	2.32	11.59	2.32	U
142-28-9	1,3-Dichloropropane	0.51	2.54	0.51	2.43	12.11	2.43	U
124-48-1	Dibromochloromethane	0.31	1.55	0.73	2.71	13.60	6.41	J
106-93-4	1,2-Dibromoethane	0.87	4.37	0.87	6.93	34.66	6.93	U
127-18-4	Tetrachloroethylene	0.86	4.28	0.86	6.00	30.00	6.00	U
108-90-7	Chlorobenzene	0.86	4.28	0.86	4.07	20.37	4.07	U
630-20-6	1,1,1,2-Tetrachloroethane	0.32	1.80	0.32	2.27	11.31	2.27	U
100-41-4	Ethylbenzene	0.87	4.37	0.87	3.92	19.59	3.92	U
108-38-3	m & p-Xylene	1.73	8.65	1.73	7.76	38.80	7.76	U
100-42-5	Styrene	0.87	4.33	0.87	3.81	19.07	3.81	U
75-25-2	Bromoform	0.21	1.04	0.58	2.21	11.12	6.02	J
95-47-6	o-Xylene	0.86	4.28	0.86	3.84	19.21	3.84	U
79-34-5	1,1,2,2-Tetrachloroethane	0.86	4.28	0.86	6.07	30.36	6.07	U
96-18-4	1,2,3-Trichloropropane	0.38	1.90	0.38	2.37	11.82	2.37	U
103-65-1	n-Propylbenzene	0.58	2.91	0.58	2.94	14.75	2.94	U
98-82-8	Isopropylbenzene	0.59	2.94	0.59	2.98	14.92	2.98	U
108-67-8	1,3,5-Trimethylbenzene	0.89	4.45	0.89	4.52	22.60	4.52	U
98-06-6	tert-butyl benzene	0.51	2.57	0.51	2.90	14.57	2.90	U
95-63-6	1,2,4-Trimethylbenzene	0.86	4.28	0.86	4.35	21.75	4.35	U
135-98-8	sec-butylbenzene	0.55	2.74	0.55	3.09	15.52	3.09	U
541-73-1	1,3-Dichlorobenzene	0.86	4.28	0.86	5.32	26.59	5.32	U
99-87-6	Isopropyltoluene	0.54	2.69	0.54	3.05	15.23	3.05	U
100-44-7	Benzyl chloride	0.99	9.88	0.99	5.28	52.81	5.28	U
106-46-7	1,4-Dichlorobenzene	1.71	17.14	1.71	10.84	106.38	10.64	U
104-51-8	n-Butylbenzene	1.01	10.08	1.01	5.71	57.13	5.71	U
95-50-1	1,2-Dichlorobenzene	1.68	16.80	1.68	10.43	104.29	10.43	U
96-12-8	1,2-Dibromo-3-chloropropane	2.81	11.26	2.81	28.08	112.32	28.08	U
120-82-1	1,2,4-Trichlorobenzene	1.73	17.30	1.73	13.26	132.56	13.26	U
87-68-3	Hexachlorobutadiene	1.73	17.30	1.73	19.06	190.58	19.06	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		9.952		100		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 13

File: 1007013A.D	Date Sampled: 02/18/10	Time: 14:11
Description: STA-3C-BLANK	Date Received: 02/23/10	
Can/Tube#: 128	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/07/10	Time: 17:25
QC_Batch: 030710-MS1	Can Dilution Factor: 1.41	
Air Volume: 1000 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.37	0.07	0.38	1.89	0.38	U
74-87-3	Chloromethane	0.07	0.36	0.07	0.15	0.77	0.15	U
75-01-4	Vinyl chloride	0.07	0.37	0.07	0.19	0.97	0.19	U
74-83-9	Bromomethane	0.07	0.37	0.07	0.29	1.47	0.29	U
75-00-3	Chloroethane	0.07	0.37	0.07	0.20	1.00	0.20	U
64-17-5	Ethanol	0.24	1.21	1.08	0.47	2.36	2.11	J
75-69-4	Trichlorofluoromethane	0.07	0.37	0.07	0.43	2.13	0.43	U
75-05-8	Acetonitrile	0.14	0.72	0.14	0.25	1.25	0.25	U
67-64-1	Acetone	0.08	1.60	2.51	0.20	3.92	6.16	
4227-95-6	Methyl iodide	0.02	0.11	0.02	0.13	0.64	0.13	U
75-35-4	1,1-Dichloroethene	0.07	0.36	0.07	0.29	1.46	0.29	U
76-13-1	Freon 113	0.07	0.36	0.07	0.57	2.84	0.57	U
75-09-2	Dichloromethane	0.07	0.37	0.07	0.26	1.31	0.26	U
75-15-0	Carbon disulfide	0.06	0.30	0.29	0.19	0.97	0.92	J
156-60-5	trans-1,2-Dichloroethene	0.05	0.94	0.05	0.19	3.83	0.19	U
1634-04-4	Methyl tert butyl ether	0.05	0.96	0.05	0.18	3.56	0.18	U
75-34-3	1,1-Dichloroethane	0.07	0.36	0.07	0.30	1.49	0.30	U
108-05-4	Vinyl acetate	0.06	1.14	0.06	0.21	4.15	0.21	U
78-93-3	2-Butanone	0.07	0.33	0.63	0.20	1.00	1.91	
74-97-5	Bromochloromethane	0.03	0.17	0.03	0.19	0.95	0.19	U
78-83-1	Isobutyl alcohol	0.05	1.07	0.05	0.17	3.35	0.17	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.36	0.07	0.30	1.49	0.30	U
594-20-7	2,2-Dichloropropane	0.06	1.15	0.06	0.28	5.51	0.28	U
67-66-3	Chloroform	0.07	0.36	0.07	0.36	1.81	0.36	U
71-55-6	1,1,1-Trichloroethane	0.07	0.36	0.07	0.41	2.03	0.41	U
107-06-2	1,2-Dichloroethane	0.07	0.36	0.07	0.30	1.52	0.30	U
563-58-6	1,1-Dichloropropene	0.04	0.21	0.04	0.20	1.00	0.20	U
71-43-2	Benzene	0.07	0.36	0.09	0.24	1.20	0.30	J
56-23-5	Carbon tetrachloride	0.07	0.36	0.07	0.47	2.34	0.47	U
142-82-5	n-Heptane	0.04	0.20	0.04	0.17	0.84	0.17	U
78-87-5	1,2-Dichloropropane	0.07	0.36	0.07	0.35	1.74	0.35	U
123-91-1	1,4 Dioxane	0.13	0.66	0.13	0.49	2.47	0.49	U
74-95-3	Dibromomethane	0.02	0.12	0.02	0.18	0.89	0.18	U
79-01-6	Trichloroethene	0.07	0.36	0.07	0.40	2.02	0.40	U
75-27-4	Bromodichloromethane	0.03	0.13	0.03	0.18	0.91	0.18	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.25	0.05	0.21	1.04	0.21	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.37	0.07	0.35	1.75	0.35	U
108-88-3	Toluene	0.07	0.36	0.07	0.28	1.41	0.28	U
10061-02-6	trans-1,3-Dichloropropene	0.07	0.37	0.07	0.34	1.72	0.34	U
79-00-5	1,1,2-Trichloroethane	0.07	0.36	0.07	0.41	2.03	0.41	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.05	0.23	0.05	0.19	0.97	0.19	U
142-28-9	1,3-Dichloropropane	0.04	0.21	0.04	0.20	1.02	0.20	U
124-48-1	Dibromochloromethane	0.03	0.13	0.03	0.23	1.14	0.23	U
106-93-4	1,2-Dibromoethane	0.07	0.37	0.07	0.58	2.91	0.58	U
127-18-4	Tetrachloroethene	0.07	0.36	0.07	0.50	2.52	0.50	U
108-90-7	Chlorobenzene	0.07	0.36	0.07	0.34	1.71	0.34	U
630-20-6	1,1,1,2-Tetrachloroethane	0.03	0.13	0.03	0.19	0.95	0.19	U
100-41-4	Ethylbenzene	0.07	0.37	0.07	0.33	1.64	0.33	U
108-38-3	m & p-Xylene	0.15	0.73	0.15	0.65	3.26	0.65	U
100-42-5	Styrene	0.07	0.36	0.07	0.32	1.60	0.32	U
75-25-2	Bromoform	0.02	0.09	0.02	0.19	0.93	0.19	U
95-47-6	o-Xylene	0.07	0.36	0.07	0.32	1.61	0.32	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.36	0.07	0.51	2.55	0.51	U
96-18-4	1,2,3-Trichloropropane	0.03	0.16	0.03	0.20	0.99	0.20	U
103-65-1	n-Propylbenzene	0.05	0.24	0.05	0.25	1.24	0.25	U
98-82-8	Isopropylbenzene	0.05	0.25	0.05	0.25	1.25	0.25	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.37	0.07	0.38	1.90	0.38	U
98-06-6	tert-butyl benzene	0.04	0.22	0.04	0.24	1.22	0.24	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.36	0.07	0.37	1.83	0.37	U
135-98-8	sec-butylbenzene	0.05	0.23	0.05	0.26	1.30	0.26	U
541-73-1	1,3-Dichlorobenzene	0.07	0.36	0.07	0.45	2.23	0.45	U
99-87-6	Isopropyltoluene	0.05	0.23	0.05	0.26	1.28	0.26	U
100-44-7	Benzyl chloride	0.08	0.83	0.08	0.44	4.43	0.44	U
106-46-7	1,4-Dichlorobenzene	0.14	1.44	0.14	0.89	8.93	0.89	U
104-51-8	n-Butylbenzene	0.08	0.85	0.08	0.48	4.79	0.48	U
95-50-1	1,2-Dichlorobenzene	0.14	1.41	0.14	0.88	8.75	0.88	U
96-12-8	1,2-Dibromo-3-chloropropane	0.24	0.94	0.24	2.36	9.43	2.36	U
120-82-1	1,2,4-Trichlorobenzene	0.15	1.45	0.15	1.11	11.13	1.11	U
87-68-3	Hexachlorobutadiene	0.15	1.45	0.15	1.60	15.99	1.60	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		9.680		97		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

# ENVIRONMENTAL Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 210070

Analytical Method: TO-15

Laboratory Number: 14

File: 1007014A.D	Date Sampled: 02/18/10	Time: 14:18
Description: STA-4C-BLANK	Date Received: 02/23/10	
Can/Tube#: 122	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/07/10	Time: 18:23
QC_Batch: 030710-MS1	Can Dilution Factor: 1.33	2
Air Volume: 1000 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.35	0.07	0.36	1.79	0.36	U
74-87-3	Chloromethane	0.07	0.34	0.10	0.14	0.72	0.20	J
75-01-4	Vinyl chloride	0.07	0.35	0.07	0.18	0.91	0.18	U
74-83-9	Bromomethane	0.07	0.35	0.07	0.28	1.39	0.28	U
75-00-3	Chloroethane	0.07	0.35	0.07	0.19	0.94	0.19	U
64-17-5	Ethanol	0.23	1.14	1.00	0.45	2.23	1.94	J
75-69-4	Trichlorofluoromethane	0.07	0.35	0.07	0.40	2.01	0.40	U
75-05-8	Acetonitrile	0.14	0.68	0.14	0.24	1.18	0.24	U
67-64-1	Acetone	0.08	1.51	1.86	0.18	3.69	4.55	
4227-95-6	Methyl iodide	0.02	0.10	0.02	0.12	0.60	0.12	U
75-35-4	1,1-Dichloroethene	0.07	0.34	0.07	0.27	1.38	0.27	U
76-13-1	Freon 113	0.07	0.34	0.07	0.54	2.68	0.54	U
75-09-2	Dichloromethane	0.07	0.35	0.07	0.25	1.24	0.25	U
75-15-0	Carbon disulfide	0.06	0.28	0.38	0.18	0.91	1.23	
156-60-5	trans-1,2-Dichloroethene	0.04	0.88	0.04	0.18	3.61	0.18	U
1634-04-4	Methyl tert butyl ether	0.05	0.90	0.05	0.17	3.36	0.17	U
75-34-3	1,1-Dichloroethane	0.07	0.34	0.07	0.28	1.41	0.28	U
108-05-4	Vinyl acetate	0.05	1.08	0.05	0.20	3.91	0.20	U
78-93-3	2-Butanone	0.06	0.31	0.52	0.19	0.95	1.60	
74-97-5	Bromochloromethane	0.03	0.16	0.03	0.18	0.89	0.18	U
78-83-1	Isobutyl alcohol	0.05	1.01	0.05	0.16	3.16	0.16	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.34	0.07	0.28	1.40	0.28	U
594-20-7	2,2-Dichloropropane	0.05	1.09	0.05	0.26	5.20	0.26	U
67-66-3	Chloroform	0.07	0.34	0.07	0.34	1.71	0.34	U
71-55-6	1,1,1-Trichloroethane	0.07	0.34	0.07	0.38	1.91	0.38	U
107-06-2	1,2-Dichloroethane	0.07	0.34	0.07	0.29	1.43	0.29	U
563-58-6	1,1-Dichloropropene	0.04	0.20	0.04	0.19	0.95	0.19	U
71-43-2	Benzene	0.07	0.34	0.08	0.23	1.13	0.26	J
56-23-5	Carbon tetrachloride	0.07	0.34	0.07	0.44	2.20	0.44	U
142-82-5	n-Heptane	0.04	0.19	0.04	0.16	0.79	0.16	U
78-87-5	1,2-Dichloropropane	0.07	0.34	0.07	0.33	1.64	0.33	U
123-91-1	1,4 Dioxane	0.13	0.63	0.13	0.47	2.33	0.47	U
74-95-3	Dibromomethane	0.02	0.11	0.02	0.17	0.84	0.17	U
79-01-6	Trichloroethene	0.07	0.34	0.07	0.38	1.90	0.38	U
75-27-4	Bromodichloromethane	0.02	0.12	0.02	0.17	0.86	0.17	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.23	0.05	0.20	0.98	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.35	0.07	0.33	1.65	0.33	U
108-88-3	Toluene	0.07	0.34	0.07	0.27	1.33	0.27	U
10061-02-6	trans-1,3-Dichloropropene	0.07	0.35	0.07	0.32	1.62	0.32	U
79-00-5	1,1,2-Trichloroethane	0.07	0.34	0.07	0.38	1.91	0.38	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.04	0.22	0.04	0.18	0.92	0.18	U
142-28-9	1,3-Dichloropropane	0.04	0.20	0.04	0.19	0.96	0.19	U
124-48-1	Dibromochlormethane	0.02	0.12	0.02	0.21	1.08	0.21	U
106-93-4	1,2-Dibromoethane	0.07	0.35	0.07	0.55	2.74	0.55	U
127-18-4	Tetrachloroethene	0.07	0.34	0.07	0.47	2.37	0.47	U
108-90-7	Chlorobenzene	0.07	0.34	0.07	0.32	1.61	0.32	U
630-20-6	1,1,1,2-Tetrachloroethane	0.03	0.13	0.03	0.18	0.90	0.18	U
100-41-4	Ethylbenzene	0.07	0.35	0.07	0.31	1.55	0.31	U
108-38-3	m & p-Xylene	0.14	0.68	0.14	0.61	3.07	0.61	U
100-42-5	Styrene	0.07	0.34	0.07	0.30	1.51	0.30	U
75-25-2	Bromoform	0.02	0.08	0.02	0.18	0.88	0.18	U
95-47-6	o-Xylene	0.07	0.34	0.07	0.30	1.52	0.30	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.34	0.07	0.48	2.40	0.48	U
96-18-4	1,2,3-Trichloropropane	0.03	0.15	0.03	0.19	0.94	0.19	U
103-65-1	n-Propylbenzene	0.05	0.23	0.05	0.23	1.17	0.23	U
98-82-8	Isopropylbenzene	0.05	0.23	0.05	0.24	1.18	0.24	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.35	0.07	0.36	1.79	0.36	U
98-06-6	tert-butyl benzene	0.04	0.20	0.04	0.23	1.15	0.23	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.34	0.07	0.34	1.72	0.34	U
135-98-8	sec-butylbenzene	0.04	0.22	0.04	0.24	1.23	0.24	U
541-73-1	1,3-Dichlorobenzene	0.07	0.34	0.07	0.42	2.11	0.42	U
99-87-6	Isopropyltoluene	0.04	0.21	0.04	0.24	1.21	0.24	U
100-44-7	Benzyl chloride	0.08	0.78	0.08	0.42	4.18	0.42	U
106-46-7	1,4-Dichlorobenzene	0.14	1.36	0.14	0.84	8.42	0.84	U
104-51-8	n-Butylbenzene	0.08	0.80	0.08	0.45	4.52	0.45	U
95-50-1	1,2-Dichlorobenzene	0.13	1.33	0.13	0.83	8.26	0.83	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.89	0.22	2.22	8.89	2.22	U
120-82-1	1,2,4-Trichlorobenzene	0.14	1.37	0.14	1.05	10.49	1.05	U
87-68-3	Hexachlorobutadiene	0.14	1.37	0.14	1.51	15.09	1.51	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		9.789		98		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 15

File: 1007015A.D

Date Sampled: 02/19/10 Time: 8:05

Description: STA-4E-5

Date Received: 02/23/10

Can/Tube#: 316

Date Extracted:

Sam\_Type: SA

Date Analyzed:

QC\_Batch: 030910-MS1

Can Dilution Factor: 1.52

Air Volume: 200 ml

Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.40	2.00	0.64	2.04	10.21	3.28	J
74-87-3	Chloromethane	0.39	1.94	1.38	0.83	4.13	2.95	J
75-01-4	Vinyl chloride	0.40	1.98	0.40	1.04	5.22	1.04	U
74-83-9	Bromomethane	0.40	1.98	0.40	1.58	7.92	1.58	U
75-00-3	Chloroethane	0.40	1.98	0.70	1.08	5.38	1.92	J
64-17-5	Ethanol	1.31	6.54	12.53	2.54	12.72	24.39	
75-69-4	Trichlorofluoromethane	0.40	1.98	0.40	2.29	11.47	2.29	U
75-05-8	Acetonitrile	0.78	3.88	0.78	1.35	6.73	1.35	U
67-64-1	Acetone	0.43	8.60	172.05	1.06	21.11	422.14	
4227-95-6	Methyl iodide	0.11	0.57	0.11	0.69	3.44	0.69	U
75-35-4	1,1-Dichloroethene	0.38	1.92	0.38	1.57	7.87	1.57	U
76-13-1	Freon 113	0.39	1.94	0.39	3.07	15.33	3.07	U
75-09-2	Dichloromethane	0.40	1.98	0.40	1.42	7.08	1.42	U
75-15-0	Carbon disulfide	0.32	1.63	0.48	1.04	5.23	1.55	J
156-60-5	trans-1,2-Dichloroethene	0.25	5.05	0.25	1.03	20.65	1.03	U
1634-04-4	Methyl tert butyl ether	0.26	5.16	0.26	0.96	19.20	0.96	U
75-34-3	1,1-Dichloroethane	0.38	1.92	0.38	1.60	8.04	1.60	U
108-05-4	Vinyl acetate	0.31	6.15	0.31	1.12	22.36	1.12	U
78-93-3	2-Butanone	0.36	1.78	29.40	1.08	5.41	89.51	
74-97-5	Bromochloromethane	0.19	0.93	0.19	1.02	5.11	1.02	U
78-83-1	Isobutyl alcohol	0.29	5.78	0.29	0.90	18.07	0.90	U
156-59-2	cis-1,2-Dichloroethene	0.39	1.96	0.39	1.60	8.02	1.60	U
594-20-7	2,2-Dichloropropane	0.31	6.22	0.31	1.49	29.70	1.49	U
67-66-3	Chloroform	0.39	1.94	60.02	1.95	9.77	302.65	
71-55-6	1,1,1-Trichloroethane	0.39	1.94	0.39	2.18	10.92	2.18	U
107-06-2	1,2-Dichloroethane	0.39	1.96	0.39	1.64	8.20	1.64	U
563-58-6	1,1-Dichloropropene	0.23	1.16	0.23	1.08	5.42	1.08	U
71-43-2	Benzene	0.39	1.96	2.29	1.29	6.47	7.55	
56-23-5	Carbon tetrachloride	0.39	1.94	0.94	2.52	12.59	6.13	J
142-82-5	n-Heptane	0.21	1.06	0.90	0.90	4.50	3.80	J
78-87-5	1,2-Dichloropropane	0.39	1.96	0.39	1.87	9.36	1.87	U
123-91-1	1,4 Dioxane	0.71	3.57	0.71	2.66	13.29	2.66	U
74-95-3	Dibromomethane	0.13	0.65	0.13	0.97	4.80	0.97	U
79-01-6	Trichloroethene	0.39	1.96	0.39	2.17	10.88	2.17	U
75-27-4	Bromodichloromethane	0.14	0.71	0.14	0.97	4.89	0.97	U
108-10-1	Methyl Isobutyl Ketone	0.26	1.32	0.26	1.12	5.60	1.12	U
10061-01-5	cis-1,3-Dichloropropene	0.40	2.01	0.40	1.89	9.44	1.89	U
108-88-3	Toluene	0.39	1.96	7.26	1.52	7.63	28.22	
10061-02-6	trans-1,3-Dichloropropene	0.40	1.98	0.40	1.85	9.26	1.85	U
79-00-5	1,1,2-Trichloroethane	0.39	1.94	0.39	2.18	10.92	2.18	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.25	1.24	2.17	1.05	5.24	9.18	
142-28-9	1,3-Dichloropropane	0.23	1.15	0.23	1.10	5.48	1.10	U
124-48-1	Dibromochloromethane	0.14	0.70	0.14	1.23	6.15	1.23	U
106-93-4	1,2-Dibromoethane	0.40	1.98	0.40	3.14	15.68	3.14	U
127-18-4	Tetrachloroethene	0.39	1.94	0.39	2.71	13.57	2.71	U
108-90-7	Chlorobenzene	0.39	1.94	0.39	1.84	9.22	1.84	U
630-20-6	1,1,1,2-Tetrachloroethane	0.14	0.72	0.14	1.03	5.12	1.03	U
100-41-4	Ethylbenzene	0.40	1.98	1.58	1.77	8.86	7.07	J
108-38-3	m & p-Xylene	0.78	3.91	17.21	3.51	17.55	77.17	
100-42-5	Styrene	0.39	1.96	0.39	1.72	8.63	1.72	U
75-25-2	Bromoform	0.09	0.47	0.09	1.00	5.03	1.00	U
95-47-6	o-Xylene	0.39	1.94	9.27	1.74	8.69	41.56	
79-34-5	1,1,2,2-Tetrachloroethane	0.39	1.94	0.39	2.75	13.73	2.75	U
96-18-4	1,2,3-Trichloropropane	0.17	0.86	0.17	1.07	5.35	1.07	U
103-65-1	n-Propylbenzene	0.26	1.31	1.01	1.33	6.67	5.10	J
98-82-8	Isopropylbenzene	0.27	1.33	8.15	1.35	6.75	41.35	
108-67-8	1,3,5-Trimethylbenzene	0.40	2.01	2.93	2.04	10.22	14.86	
98-06-6	tert-butyl benzene	0.23	1.16	1.46	1.31	6.59	8.26	
95-83-6	1,2,4-Trimethylbenzene	0.39	1.94	10.37	1.97	9.84	52.62	
135-98-8	sec-butylbenzene	0.25	1.24	0.25	1.40	7.02	1.40	U
541-73-1	1,3-Dichlorobenzene	0.39	1.94	0.39	2.41	12.03	2.41	U
99-87-6	Isopropyltoluene	0.24	1.22	0.24	1.38	6.89	1.38	U
100-44-7	Benzyl chloride	0.45	4.47	0.45	2.39	23.89	2.39	U
106-46-7	1,4-Dichlorobenzene	0.78	7.75	0.78	4.81	48.12	4.81	U
104-51-8	n-Butylbenzene	0.46	4.56	0.46	2.58	25.84	2.58	U
95-50-1	1,2-Dichlorobenzene	0.76	7.60	0.76	4.72	47.18	4.72	U
96-12-8	1,2-Dibromo-3-chloropropane	1.27	5.09	1.27	12.70	50.81	12.70	U
120-82-1	1,2,4-Trichlorobenzene	0.78	7.83	0.78	6.00	59.97	6.00	U
87-68-3	Hexachlorobutadiene	0.78	7.83	0.78	8.62	86.21	8.62	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		9.435		94		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 16

File: 1007016A.D

Date Sampled: 02/19/10 Time: 8:37

Description: STA-4E-10

Date Received: 02/23/10

Can/Tube#: 384

Date Extracted:

Sam\_Type: SA

Date Analyzed:

QC\_Batch: 031210-MS1

Can Dilution Factor:

Air Volume: 200 ml

Not Detected Flag:

1.62 U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.43	2.13	0.43	2.17	10.88	2.17	U
74-87-3	Chloromethane	0.41	2.07	1.91	0.88	4.40	4.07	J
75-01-4	Vinyl chloride	0.42	2.11	0.42	1.11	5.56	1.11	U
74-83-9	Bromomethane	0.42	2.11	0.42	1.69	8.44	1.69	U
75-00-3	Chloroethane	0.42	2.11	0.52	1.15	5.74	1.41	J
64-17-5	Ethanol	1.39	6.97	2.55	2.71	13.56	4.96	J
75-69-4	Trichlorofluoromethane	0.42	2.11	0.42	2.44	12.22	2.44	U
75-05-8	Acetonitrile	0.83	4.13	0.83	1.43	7.17	1.43	U
67-64-1	Acetone	0.46	9.17	12.20	1.12	22.50	29.94	
4227-95-6	Methyl iodide	0.12	0.61	0.12	0.73	3.67	0.73	U
75-35-4	1,1-Dichloroethene	0.41	2.05	0.41	1.67	8.39	1.67	U
76-13-1	Freon 113	0.41	2.07	0.41	3.27	16.34	3.27	U
75-09-2	Dichloromethane	0.42	2.11	0.42	1.51	7.55	1.51	U
75-15-0	Carbon disulfide	0.35	1.73	0.75	1.11	5.57	2.41	J
156-60-5	trans-1,2-Dichloroethene	0.27	5.38	0.27	1.10	22.01	1.10	U
1634-04-4	Methyl tert butyl ether	0.27	5.50	0.27	1.02	20.46	1.02	U
75-34-3	1,1-Dichloroethane	0.41	2.05	0.41	1.71	8.57	1.71	U
108-05-4	Vinyl acetate	0.33	6.55	0.33	1.19	23.83	1.19	U
78-93-3	2-Butanone	0.38	1.90	2.83	1.16	5.77	8.62	
74-97-5	Bromo(chloromethane)	0.20	1.00	0.20	1.08	5.44	1.08	U
78-83-1	Isobutyl alcohol	0.31	6.16	0.31	0.96	19.26	0.96	U
156-59-2	cis-1,2-Dichloroethene	0.42	2.09	0.42	1.71	8.55	1.71	U
594-20-7	2,2-Dichloropropane	0.33	6.63	0.33	1.58	31.66	1.58	U
67-66-3	Chloroform	0.41	2.07	79.85	2.08	10.41	402.61	
71-55-6	1,1,1-Trichloroethane	0.41	2.07	0.41	2.33	11.64	2.33	U
107-06-2	1,2-Dichloroethane	0.42	2.09	0.42	1.74	8.74	1.74	U
563-58-6	1,1-Dichloropropene	0.25	1.23	0.25	1.15	5.77	1.15	U
71-43-2	Benzene	0.42	2.09	21.77	1.38	6.89	71.79	
56-23-5	Carbon tetrachloride	0.41	2.07	1.25	2.68	13.42	8.15	J
142-82-5	n-Heptane	0.23	1.13	1.55	0.96	4.80	6.56	
78-87-5	1,2-Dichloropropane	0.42	2.09	0.42	1.99	9.97	1.99	U
123-91-1	1,4 Dioxane	0.76	3.81	0.76	2.83	14.16	2.83	U
74-95-3	Dibromomethane	0.14	0.70	0.14	1.03	5.11	1.03	U
79-01-6	Trichloroethene	0.42	2.09	0.42	2.31	11.60	2.31	U
75-27-4	Bromodichloromethane	0.15	0.75	0.15	1.04	5.21	1.04	U
108-10-1	Methyl Isobutyl Ketone	0.28	1.41	0.28	1.19	5.96	1.19	U
10061-01-5	cis-1,3-Dichloropropene	0.43	2.15	0.43	2.01	10.06	2.01	U
108-88-3	Toluene	0.42	2.09	29.33	1.62	8.13	114.07	
10061-02-6	trans-1,3-Dichloropropene	0.42	2.11	0.42	1.97	9.87	1.97	U
79-00-5	1,1,2-Trichloroethane	0.41	2.07	0.41	2.33	11.64	2.33	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag				
591-78-6	2-Hexanone	0.26	1.32	0.26	1.12	5.59	1.12	U				
142-28-9	1,3-Dichloropropane	0.25	1.22	0.25	1.17	5.84	1.17	U				
124-48-1	Dibromochloromethane	0.15	0.75	0.15	1.31	6.56	1.31	U				
106-93-4	1,2-Dibromoethane	0.42	2.11	0.42	3.34	16.71	3.34	U				
127-18-4	Tetrachloroethylene	0.41	2.07	0.41	2.89	14.46	2.89	U				
108-90-7	Chlorobenzene	0.41	2.07	0.41	1.96	9.82	1.96	U				
630-20-6	1,1,1,2-Tetrachloroethane	0.15	0.77	0.15	1.09	5.45	1.09	U				
100-41-4	Ethylbenzene	0.42	2.11	1.98	1.89	9.44	8.87	J				
108-38-3	m & p-Xylene	0.83	4.17	9.45	3.74	18.71	42.37					
100-42-5	Styrene	0.42	2.09	0.42	1.84	9.20	1.84	U				
75-25-2	Bromoform	0.10	0.50	0.10	1.07	5.36	1.07	U				
95-47-6	o-Xylene	0.41	2.07	3.80	1.85	9.26	17.03					
79-34-5	1,1,2,2-Tetrachloroethane	0.41	2.07	0.41	2.93	14.64	2.93	U				
96-18-4	1,2,3-Trichloropropane	0.18	0.92	0.18	1.14	5.70	1.14	U				
103-65-1	n-Propylbenzene	0.28	1.40	0.55	1.42	7.11	2.78	J				
98-82-8	Isopropylbenzene	0.28	1.42	1.87	1.44	7.20	9.49					
108-67-8	1,3,5-Trimethylbenzene	0.43	2.15	0.65	2.18	10.90	3.29	J				
98-06-6	tert-butyl benzene	0.25	1.24	0.38	1.40	7.02	2.17	J				
95-63-6	1,2,4-Trimethylbenzene	0.41	2.07	2.56	2.10	10.48	12.99					
135-98-8	sec-butylbenzene	0.26	1.32	0.26	1.49	7.48	1.49	U				
541-73-1	1,3-Dichlorobenzene	0.41	2.07	0.41	2.56	12.82	2.56	U				
99-87-6	Isopropyltoluene	0.28	1.30	0.26	1.47	7.34	1.47	U				
100-44-7	Benzyl chloride	0.48	4.76	0.48	2.55	25.46	2.55	U				
106-46-7	1,4-Dichlorobenzene	0.83	8.28	0.83	5.13	51.29	5.13	U				
104-51-8	n-Butylbenzene	0.49	4.86	0.49	2.75	27.54	2.75	U				
95-50-1	1,2-Dichlorobenzene	0.81	8.10	0.81	5.03	50.28	5.03	U				
96-12-8	1,2-Dibromo-3-chloropropane	1.36	5.43	1.36	13.54	54.16	13.54	U				
120-82-1	1,2,4-Trichlorobenzene	0.83	8.34	0.83	6.39	63.91	6.39	U				
87-68-3	Hexachlorobutadiene	0.83	8.34	0.83	9.19	91.89	9.19	U				
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag					
Toluene-d8		10.000		% Rec.		Limits	*	= Out				
9.959												
100												
70-130												

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 17

File: 1007017A.D	Date Sampled: 02/19/10	Time: 9:31
Description: STA-4N-5	Date Received: 02/23/10	
Can/Tube#: 383	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 13:37
QC_Batch: 031410-MS1	Can Dilution Factor: 1.55	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.41	2.04	0.41	2.08	10.41	2.08	U
74-87-3	Chloromethane	0.40	1.98	0.91	0.84	4.21	1.94	J
75-01-4	Vinyl chloride	0.40	2.02	0.40	1.06	5.32	1.06	U
74-83-9	Bromomethane	0.40	2.02	0.40	1.62	8.08	1.62	U
75-00-3	Chloroethane	0.40	2.02	0.40	1.10	5.49	1.10	U
64-17-5	Ethanol	1.33	6.67	1.33	2.60	12.98	2.60	U
75-69-4	Trichlorofluoromethane	0.40	2.02	0.40	2.34	11.69	2.34	U
75-05-8	Acetonitrile	0.79	3.95	0.79	1.37	6.86	1.37	U
67-64-1	Acetone	0.44	8.77	7.07	1.08	21.52	17.34	J
4227-95-6	Methyl iodide	0.12	0.58	0.12	0.70	3.51	0.70	U
75-35-4	1,1-Dichloroethene	0.39	1.96	0.39	1.60	8.02	1.60	U
76-13-1	Freon 113	0.40	1.98	0.40	3.13	15.63	3.13	U
75-09-2	Dichloromethane	0.40	2.02	0.40	1.44	7.22	1.44	U
75-15-0	Carbon disulfide	0.33	1.66	0.33	1.06	5.33	1.06	U
156-60-5	trans-1,2-Dichloroethene	0.26	5.15	0.26	1.05	21.06	1.05	U
1634-04-4	Methyl tert butyl ether	0.26	5.26	0.26	0.98	19.58	0.98	U
75-34-3	1,1-Dichloroethane	0.39	1.96	0.39	1.64	8.20	1.64	U
108-05-4	Vinyl acetate	0.31	6.27	0.31	1.14	22.80	1.14	U
78-93-3	2-Butanone	0.36	1.81	1.89	1.11	5.52	5.76	
74-97-5	Bromochloromethane	0.19	0.95	0.19	1.04	5.21	1.04	U
78-83-1	Isobutyl alcohol	0.29	5.89	0.29	0.92	18.43	0.92	U
156-59-2	cis-1,2-Dichloroethene	0.40	2.00	0.40	1.63	8.18	1.63	U
594-20-7	2,2-Dichloropropane	0.32	6.35	0.32	1.51	30.29	1.51	U
67-66-3	Chloroform	0.40	1.98	24.83	1.99	9.96	125.18	
71-55-6	1,1,1-Trichloroethane	0.40	1.98	0.40	2.23	11.13	2.23	U
107-06-2	1,2-Dichloroethane	0.40	2.00	0.40	1.67	8.36	1.67	U
563-58-6	1,1-Dichloropropene	0.23	1.18	0.23	1.10	5.52	1.10	U
71-43-2	Benzene	0.40	2.00	1.05	1.32	6.59	3.48	J
56-23-5	Carbon tetrachloride	0.40	1.98	0.55	2.57	12.84	3.56	J
142-82-5	n-Heptane	0.22	1.09	0.65	0.91	4.59	2.75	J
78-87-5	1,2-Dichloropropane	0.40	2.00	0.40	1.90	9.54	1.90	U
123-91-1	1,4 Dioxane	0.73	3.64	0.73	2.71	13.55	2.71	U
74-95-3	Dibromomethane	0.13	0.67	0.13	0.98	4.89	0.98	U
79-01-6	Trichloroethene	0.40	2.00	0.40	2.21	11.10	2.21	U
75-27-4	Bromodichloromethane	0.14	0.72	0.14	0.99	4.99	0.99	U
108-10-1	Methyl Isobutyl Ketone	0.27	1.35	0.27	1.14	5.71	1.14	U
10061-01-5	cis-1,3-Dichloropropene	0.41	2.05	0.41	1.93	9.63	1.93	U
108-88-3	Toluene	0.40	2.00	0.62	1.55	7.78	2.42	J
10061-02-6	trans-1,3-Dichloropropene	0.40	2.02	0.40	1.89	9.45	1.89	U
79-00-5	1,1,2-Trichloroethane	0.40	1.98	0.40	2.23	11.13	2.23	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.25	1.26	0.25	1.07	5.35	1.07	U
142-28-9	1,3-Dichloropropane	0.23	1.17	0.23	1.12	5.58	1.12	U
124-48-1	Dibromochloromethane	0.14	0.71	0.14	1.25	6.27	1.25	U
106-93-4	1,2-Dibromoethane	0.40	2.02	0.40	3.20	15.99	3.20	U
127-18-4	Tetrachloroethylene	0.40	1.98	0.40	2.77	13.84	2.77	U
108-90-7	Chlorobenzene	0.40	1.98	0.40	1.88	9.40	1.88	U
630-20-6	1,1,1,2-Tetrachloroethane	0.15	0.74	0.15	1.05	5.22	1.05	U
100-41-4	Ethylbenzene	0.40	2.02	0.40	1.81	9.04	1.81	U
108-38-3	m & p-Xylene	0.80	3.99	0.80	3.58	17.90	3.58	U
100-42-5	Styrene	0.40	2.00	0.40	1.76	8.80	1.76	U
75-25-2	Bromoform	0.10	0.48	0.10	1.02	5.13	1.02	U
95-47-6	o-Xylene	0.40	1.98	0.40	1.77	8.86	1.77	U
79-34-5	1,1,2,2-Tetrachloroethane	0.40	1.98	0.40	2.80	14.00	2.80	U
96-18-4	1,2,3-Trichloropropane	0.18	0.88	0.18	1.09	5.45	1.09	U
103-65-1	n-Propylbenzene	0.27	1.34	0.27	1.36	6.81	1.36	U
98-82-8	Isopropylbenzene	0.27	1.36	0.27	1.38	6.88	1.38	U
108-67-8	1,3,5-Trimethylbenzene	0.41	2.05	0.41	2.08	10.42	2.08	U
98-06-6	tert-butyl benzene	0.24	1.19	0.24	1.34	6.72	1.34	U
95-63-6	1,2,4-Trimethylbenzene	0.40	1.98	0.40	2.01	10.03	2.01	U
135-98-8	sec-butylbenzene	0.25	1.26	0.25	1.43	7.16	1.43	U
541-73-1	1,3-Dichlorobenzene	0.40	1.98	0.40	2.45	12.27	2.45	U
99-87-6	Isopropyltoluene	0.25	1.24	0.25	1.41	7.03	1.41	U
100-44-7	Benzyl chloride	0.46	4.56	0.46	2.44	24.36	2.44	U
106-46-7	1,4-Dichlorobenzene	0.79	7.91	0.79	4.91	49.07	4.91	U
104-51-8	n-Butylbenzene	0.47	4.65	0.47	2.64	26.35	2.64	U
95-50-1	1,2-Dichlorobenzene	0.78	7.75	0.78	4.81	48.11	4.81	U
96-12-8	1,2-Dibromo-3-chloropropane	1.30	5.19	1.30	12.95	51.82	12.95	U
120-82-1	1,2,4-Trichlorobenzene	0.80	7.98	0.80	6.11	61.15	6.11	U
87-68-3	Hexachlorobutadiene	0.80	7.98	0.80	8.79	87.92	8.79	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		8.234		82		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 18

File: 1007018A.D

Date Sampled: 02/19/10 Time: 10:01

Description: STA-4N-10

Date Received: 02/23/10

Can/Tube#: 379

Date Extracted:

Sam\_Type: SA

Date Analyzed:

QC\_Batch: 031110-MS1

Can Dilution Factor:

Air Volume: 200 ml

Time: 18:27

1.56 2

Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.41	2.05	0.41	2.09	10.47	2.09	U
74-87-3	Chloromethane	0.40	1.99	0.40	0.85	4.24	0.85	U
75-01-4	Vinyl chloride	0.41	2.03	0.41	1.07	5.35	1.07	U
74-83-9	Bromomethane	0.41	2.03	0.41	1.63	8.13	1.63	U
75-00-3	Chloroethane	0.41	2.03	0.41	1.10	5.52	1.10	U
64-17-5	Ethanol	1.34	6.71	1.34	2.61	13.06	2.61	U
75-69-4	Trichlorofluoromethane	0.41	2.03	0.41	2.35	11.77	2.35	U
75-05-8	Acetonitrile	0.80	3.98	0.80	1.38	6.90	1.38	U
67-64-1	Acetone	0.44	8.83	277.57	1.08	21.66	681.04	
4227-95-6	Methyl iodide	0.12	0.59	0.12	0.71	3.53	0.71	U
75-35-4	1,1-Dichloroethene	0.39	1.97	0.39	1.61	8.08	1.61	U
76-13-1	Freon 113	0.40	1.99	0.40	3.15	15.73	3.15	U
75-09-2	Dichloromethane	0.41	2.03	0.43	1.45	7.27	1.55	J
75-15-0	Carbon disulfide	0.33	1.67	0.54	1.07	5.36	1.72	J
156-60-5	trans-1,2-Dichloroethene	0.26	5.18	0.26	1.06	21.19	1.06	U
1634-04-4	Methyl tert butyl ether	0.26	5.30	0.26	0.99	19.70	0.99	U
75-34-3	1,1-Dichloroethane	0.39	1.97	0.39	1.65	8.25	1.65	U
108-05-4	Vinyl acetate	0.32	6.31	0.32	1.15	22.94	1.15	U
78-93-3	2-Butanone	0.37	1.83	55.63	1.11	5.56	169.37	
74-97-5	Bromochloromethane	0.19	0.96	0.19	1.04	5.24	1.04	U
78-83-1	Isobutyl alcohol	0.30	5.93	0.30	0.93	18.55	0.93	U
156-59-2	cis-1,2-Dichloroethene	0.40	2.01	0.40	1.64	8.23	1.64	U
594-20-7	2,2-Dichloropropane	0.32	6.39	0.32	1.52	30.48	1.52	U
67-66-3	Chloroform	0.40	1.99	55.20	2.01	10.03	278.35	
71-55-6	1,1,1-Trichloroethane	0.40	1.99	0.40	2.24	11.20	2.24	U
107-06-2	1,2-Dichloroethane	0.40	2.01	0.40	1.68	8.41	1.68	U
563-58-6	1,1-Dichloropropene	0.24	1.19	0.24	1.11	5.56	1.11	U
71-43-2	Benzene	0.40	2.01	1.58	1.32	6.64	5.22	J
56-23-5	Carbon tetrachloride	0.40	1.99	0.88	2.58	12.92	5.71	J
142-82-5	n-Heptane	0.22	1.09	1.39	0.92	4.62	5.89	
78-87-5	1,2-Dichloropropane	0.40	2.01	0.40	1.92	9.60	1.92	U
123-91-1	1,4 Dioxane	0.73	3.67	0.73	2.73	13.64	2.73	U
74-95-3	Dibromomethane	0.13	0.67	0.13	0.99	4.92	0.99	U
79-01-6	Trichloroethene	0.40	2.01	0.40	2.23	11.17	2.23	U
75-27-4	Bromodichloromethane	0.14	0.73	0.14	1.00	5.02	1.00	U
108-10-1	Methyl Isobutyl Ketone	0.27	1.36	0.27	1.15	5.74	1.15	U
10061-01-5	cis-1,3-Dichloropropene	0.41	2.07	0.41	1.94	9.69	1.94	U
108-88-3	Toluene	0.40	2.01	2.40	1.58	7.83	9.35	
10061-02-6	trans-1,3-Dichloropropene	0.41	2.03	0.41	1.90	9.51	1.90	U
79-00-5	1,1,2-Trichloroethane	0.40	1.99	0.40	2.24	11.20	2.24	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.25	1.27	6.68	1.08	5.38	28.28	
142-28-9	1,3-Dichloropropane	0.24	1.18	0.24	1.13	5.62	1.13	U
124-48-1	Dibromochloromethane	0.14	0.72	0.14	1.26	6.31	1.26	U
106-93-4	1,2-Dibromoethane	0.41	2.03	0.41	3.22	16.09	3.22	U
127-18-4	Tetrachloroethene	0.40	1.99	0.40	2.79	13.93	2.79	U
108-90-7	Chlorobenzene	0.40	1.99	0.40	1.89	9.46	1.89	U
630-20-6	1,1,1,2-Tetrachloroethane	0.15	0.74	0.15	1.05	5.25	1.05	U
100-41-4	Ethylbenzene	0.41	2.03	0.41	1.82	9.10	1.82	U
108-38-3	m & p-Xylene	0.80	4.02	0.80	3.60	18.02	3.60	U
100-42-5	Styrene	0.40	2.01	0.40	1.77	8.86	1.77	U
75-25-2	Bromoform	0.10	0.48	0.10	1.03	5.16	1.03	U
95-47-6	o-Xylene	0.40	1.99	0.40	1.78	8.92	1.78	U
79-34-5	1,1,2,2-Tetrachloroethane	0.40	1.99	0.40	2.82	14.09	2.82	U
96-18-4	1,2,3-Trichloropropane	0.18	0.88	0.18	1.10	5.49	1.10	U
103-65-1	n-Propylbenzene	0.27	1.35	0.27	1.37	6.85	1.37	U
98-82-8	Isopropylbenzene	0.27	1.37	0.59	1.39	6.93	3.02	J
108-67-8	1,3,5-Trimethylbenzene	0.41	2.07	0.41	2.10	10.49	2.10	U
98-06-6	tert-butyl benzene	0.24	1.19	0.24	1.35	6.76	1.35	U
95-63-6	1,2,4-Trimethylbenzene	0.40	1.99	0.40	2.02	10.10	2.02	U
135-98-8	sec-butylbenzene	0.25	1.27	0.25	1.44	7.21	1.44	U
541-73-1	1,3-Dichlorobenzene	0.40	1.99	0.40	2.47	12.35	2.47	U
99-87-6	Isopropyltoluene	0.25	1.25	0.25	1.41	7.07	1.41	U
100-44-7	Benzyl chloride	0.46	4.59	0.46	2.45	24.52	2.45	U
106-46-7	1,4-Dichlorobenzene	0.80	7.96	0.80	4.94	49.39	4.94	U
104-51-8	n-Butylbenzene	0.47	4.68	0.47	2.65	26.52	2.65	U
95-50-1	1,2-Dichlorobenzene	0.78	7.80	0.78	4.84	48.42	4.84	U
96-12-8	1,2-Dibromo-3-chloropropane	1.31	5.23	1.31	13.04	52.15	13.04	U
120-82-1	1,2,4-Trichlorobenzene	0.80	8.03	0.80	6.15	61.54	6.15	U
87-68-3	Hexachlorobutadiene	0.80	8.03	0.80	8.85	88.48	8.85	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.129		101		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 19

File: 1007019A.D	Date Sampled: 02/19/10	Time: 11:53
Description: STA-4C-5	Date Received: 02/23/10	
Can/Tube#: 4	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/11/10	Time: 19:11
QC_Batch: 031110-MS1	Can Dilution Factor: 1.50	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.39	1.97	0.43	2.01	10.07	2.17	J
74-87-3	Chloromethane	0.38	1.91	1.27	0.82	4.08	2.71	J
75-01-4	Vinyl chloride	0.39	1.95	0.39	1.03	5.15	1.03	U
74-83-9	Bromomethane	0.39	1.95	0.39	1.56	7.81	1.56	U
75-00-3	Chloroethane	0.39	1.95	0.39	1.06	5.31	1.06	U
64-17-5	Ethanol	1.29	6.45	20.49	2.51	12.56	39.89	
75-69-4	Trichlorofluoromethane	0.39	1.95	0.39	2.26	11.31	2.28	U
75-05-8	Acetonitrile	0.77	3.83	0.77	1.33	6.64	1.33	U
67-64-1	Acetone	0.42	8.49	148.37	1.04	20.83	364.04	
4227-95-6	Methyl iodide	0.11	0.56	0.11	0.68	3.39	0.68	U
75-35-4	1,1-Dichloroethene	0.38	1.90	0.38	1.55	7.76	1.55	U
76-13-1	Freon 113	0.38	1.91	0.38	3.03	15.13	3.03	U
75-09-2	Dichloromethane	0.39	1.95	0.39	1.40	6.99	1.40	U
75-15-0	Carbon disulfide	0.32	1.61	0.41	1.03	5.16	1.31	J
156-60-5	trans-1,2-Dichloroethene	0.25	4.98	0.25	1.02	20.38	1.02	U
1634-04-4	Methyl tert butyl ether	0.25	5.09	0.25	0.95	18.95	0.95	U
75-34-3	1,1-Dichloroethane	0.38	1.90	0.38	1.58	7.93	1.58	U
108-05-4	Vinyl acetate	0.30	6.07	0.32	1.10	22.06	1.17	J
78-93-3	2-Butanone	0.35	1.76	75.78	1.07	5.34	230.72	
74-97-5	Bromochloromethane	0.18	0.92	0.18	1.00	5.04	1.00	U
78-83-1	Isobutyl alcohol	0.29	5.70	0.29	0.89	17.84	0.89	U
156-59-2	cis-1,2-Dichloroethene	0.39	1.94	0.39	1.58	7.92	1.58	U
594-20-7	2,2-Dichloropropane	0.31	6.14	0.31	1.47	29.31	1.47	U
67-66-3	Chloroform	0.38	1.91	27.23	1.93	9.64	137.30	
71-55-6	1,1,1-Trichloroethane	0.38	1.91	0.38	2.15	10.77	2.15	U
107-06-2	1,2-Dichloroethane	0.39	1.94	0.39	1.61	8.09	1.61	U
563-58-6	1,1-Dichloropropene	0.23	1.14	0.23	1.07	5.34	1.07	U
71-43-2	Benzene	0.39	1.94	2.23	1.27	6.38	7.35	
56-23-5	Carbon tetrachloride	0.38	1.91	0.61	2.48	12.42	3.96	J
142-82-5	n-Heptane	0.21	1.05	2.03	0.89	4.44	8.57	
78-87-5	1,2-Dichloropropane	0.39	1.94	0.39	1.84	9.23	1.84	U
123-91-1	1,4 Dioxane	0.71	3.53	0.71	2.62	13.11	2.62	U
74-95-3	Dibromomethane	0.13	0.65	0.13	0.95	4.73	0.95	U
79-01-6	Trichloroethene	0.39	1.94	0.39	2.14	10.74	2.14	U
75-27-4	Bromodichloromethane	0.14	0.70	0.14	0.96	4.82	0.96	U
108-10-1	Methyl Isobutyl Ketone	0.26	1.31	1.79	1.10	5.52	7.56	
10061-01-5	cis-1,3-Dichloropropene	0.40	1.99	0.40	1.86	9.32	1.86	U
108-88-3	Toluene	0.39	1.94	1.80	1.50	7.53	7.00	J
10061-02-6	trans-1,3-Dichloropropene	0.39	1.95	0.39	1.83	9.14	1.83	U
79-00-5	1,1,2-Trichloroethane	0.38	1.91	0.38	2.15	10.77	2.15	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.24	1.22	9.34	1.04	5.17	39.53	
142-28-9	1,3-Dichloropropane	0.23	1.13	0.23	1.08	5.40	1.08	U
124-48-1	Dibromochloromethane	0.14	0.69	0.14	1.21	6.07	1.21	U
106-93-4	1,2-Dibromoethane	0.39	1.95	0.39	3.09	15.47	3.09	U
127-18-4	Tetrachloroethene	0.38	1.91	0.38	2.68	13.39	2.68	U
108-90-7	Chlorobenzene	0.38	1.91	0.38	1.82	9.09	1.82	U
630-20-6	1,1,1,2-Tetrachloroethane	0.14	0.71	0.14	1.01	5.05	1.01	U
100-41-4	Ethylbenzene	0.39	1.95	0.39	1.75	8.75	1.75	U
108-38-3	m & p-Xylene	0.77	3.86	0.98	3.46	17.32	4.40	J
100-42-5	Styrene	0.39	1.94	0.39	1.70	8.51	1.70	U
75-25-2	Bromoform	0.09	0.47	0.09	0.99	4.96	0.99	U
95-47-6	o-Xylene	0.38	1.91	0.45	1.72	8.58	2.02	J
79-34-5	1,1,2,2-Tetrachloroethane	0.38	1.91	0.38	2.71	13.55	2.71	U
96-18-4	1,2,3-Trichloropropane	0.17	0.85	0.17	1.06	5.28	1.06	U
103-65-1	n-Propylbenzene	0.26	1.30	0.26	1.31	6.59	1.31	U
98-82-8	Isopropylbenzene	0.26	1.31	0.26	1.33	6.66	1.33	U
108-67-8	1,3,5-Trimethylbenzene	0.40	1.99	0.40	2.02	10.09	2.02	U
98-06-6	tert-butyl benzene	0.23	1.15	0.23	1.30	6.50	1.30	U
95-63-6	1,2,4-Trimethylbenzene	0.38	1.91	0.42	1.94	9.71	2.15	J
135-98-8	sec-butylbenzene	0.24	1.22	0.24	1.38	6.93	1.38	U
541-73-1	1,3-Dichlorobenzene	0.38	1.91	0.38	2.37	11.87	2.37	U
99-87-6	Isopropyltoluene	0.24	1.20	0.24	1.36	6.80	1.36	U
100-44-7	Benzyl chloride	0.44	4.41	0.44	2.36	23.58	2.36	U
106-46-7	1,4-Dichlorobenzene	0.77	7.65	0.77	4.75	47.49	4.75	U
104-51-8	n-Butylbenzene	0.45	4.50	0.45	2.55	25.50	2.55	U
95-50-1	1,2-Dichlorobenzene	0.75	7.50	2.27	4.66	46.56	14.07	J
96-12-8	1,2-Dibromo-3-chloropropane	1.26	5.03	1.26	12.54	50.14	12.54	U
120-82-1	1,2,4-Trichlorobenzene	0.77	7.73	0.77	5.92	59.18	5.92	U
87-68-3	Hexachlorobutadiene	0.77	7.73	0.77	8.51	85.08	8.51	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.757		108		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 20

File: 1007020A.D	Date Sampled: 02/19/10	Time: 12:18
Description: STA-4C-10	Date Received: 02/23/10	
Can/Tube#: 335	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/11/10	Time: 19:53
QC_Batch: 031110-MS1	Can Dilution Factor: 1.68	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.44	2.21	0.44	2.25	11.28	2.25	U
74-87-3	Chloromethane	0.43	2.14	0.43	0.91	4.57	0.91	U
75-01-4	Vinyl chloride	0.44	2.18	0.44	1.15	5.76	1.15	U
74-83-9	Bromomethane	0.44	2.18	0.44	1.75	8.75	1.75	U
75-00-3	Chloroethane	0.44	2.18	0.44	1.19	5.95	1.19	U
64-17-5	Ethanol	1.44	7.22	1.44	2.81	14.08	2.81	U
75-69-4	Trichlorofluoromethane	0.44	2.18	0.44	2.53	12.67	2.53	U
75-05-8	Acetonitrile	0.86	4.28	0.86	1.49	7.44	1.49	U
67-64-1	Acetone	0.48	9.51	238.94	1.17	23.33	586.26	
4227-95-6	Methyl iodide	0.13	0.63	0.23	0.76	3.80	1.39	J
75-35-4	1,1-Dichloroethene	0.42	2.13	0.42	1.74	8.70	1.74	U
76-13-1	Freon 113	0.43	2.14	0.43	3.39	16.94	3.39	U
75-09-2	Dichloromethane	0.44	2.18	0.44	1.57	7.83	1.57	U
75-15-0	Carbon disulfide	0.36	1.80	0.90	1.15	5.78	2.90	J
156-60-5	trans-1,2-Dichloroethene	0.28	5.58	0.28	1.14	22.82	1.14	U
1634-04-4	Methyl tert butyl ether	0.29	5.70	0.29	1.06	21.22	1.06	U
75-34-3	1,1-Dichloroethane	0.42	2.13	0.42	1.77	8.88	1.77	U
108-05-4	Vinyl acetate	0.34	6.80	0.34	1.24	24.71	1.24	U
78-93-3	2-Butanone	0.39	1.97	81.46	1.20	5.98	248.03	
74-97-5	Bromochloromethane	0.21	1.03	0.21	1.12	5.65	1.12	U
78-83-1	Isobutyl alcohol	0.32	6.38	0.32	1.00	19.98	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.43	2.17	0.43	1.77	8.87	1.77	U
594-20-7	2,2-Dichloropropane	0.34	6.88	0.34	1.64	32.83	1.64	U
67-66-3	Chloroform	0.43	2.14	47.41	2.16	10.80	239.03	
71-55-6	1,1,1-Trichloroethane	0.43	2.14	0.43	2.41	12.07	2.41	U
107-06-2	1,2-Dichloroethane	0.43	2.17	0.43	1.81	9.06	1.81	U
563-58-6	1,1-Dichloropropene	0.25	1.28	0.25	1.19	5.99	1.19	U
71-43-2	Benzene	0.43	2.17	5.68	1.43	7.15	18.72	
56-23-5	Carbon tetrachloride	0.43	2.14	0.92	2.78	13.91	5.95	J
142-82-5	n-Heptane	0.23	1.18	4.50	0.99	4.98	19.04	
78-87-5	1,2-Dichloropropane	0.43	2.17	0.43	2.06	10.34	2.06	U
123-91-1	1,4 Dioxane	0.79	3.95	0.79	2.94	14.69	2.94	U
74-95-3	Dibromomethane	0.15	0.72	0.15	1.07	5.30	1.07	U
79-01-6	Trichloroethene	0.43	2.17	0.43	2.40	12.03	2.40	U
75-27-4	Bromo dichloromethane	0.16	0.78	0.16	1.07	5.40	1.07	U
108-10-1	Methyl Isobutyl Ketone	0.29	1.48	0.29	1.24	6.18	1.24	U
10061-01-5	cis-1,3-Dichloropropene	0.45	2.23	0.45	2.09	10.43	2.09	U
108-88-3	Toluene	0.43	2.17	22.67	1.68	8.43	88.19	
10061-02-6	trans-1,3-Dichloropropene	0.44	2.18	0.44	2.05	10.24	2.05	U
79-00-5	1,1,2-Trichloroethane	0.43	2.14	0.43	2.41	12.07	2.41	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag				
591-78-6	2-Hexanone	0.27	1.37	11.32	1.16	5.79	47.90					
142-28-9	1,3-Dichloropropane	0.25	1.27	0.25	1.21	6.05	1.21	U				
124-48-1	Dibromochloromethane	0.15	0.77	0.15	1.36	6.80	1.36	U				
106-93-4	1,2-Dibromoethane	0.44	2.18	0.44	3.47	17.33	3.47	U				
127-18-4	Tetrachloroethene	0.43	2.14	0.43	3.00	15.00	3.00	U				
108-90-7	Chlorobenzene	0.43	2.14	0.43	2.04	10.19	2.04	U				
630-20-6	1,1,1,2-Tetrachloroethane	0.16	0.80	0.16	1.13	5.65	1.13	U				
100-41-4	Ethylbenzene	0.44	2.18	0.67	1.96	9.79	2.99	J				
108-38-3	m & p-Xylene	0.87	4.33	1.58	3.88	19.40	7.10	J				
100-42-5	Styrene	0.43	2.17	0.43	1.90	9.54	1.90	U				
75-25-2	Bromoform	0.10	0.52	0.10	1.11	5.56	1.11	U				
95-47-6	o-Xylene	0.43	2.14	0.55	1.92	9.61	2.46	J				
79-34-5	1,1,2,2-Tetrachloroethane	0.43	2.14	0.43	3.04	15.18	3.04	U				
96-18-4	1,2,3-Trichloropropane	0.19	0.95	0.19	1.18	5.91	1.18	U				
103-65-1	n-Propylbenzene	0.29	1.45	0.29	1.47	7.38	1.47	U				
98-82-8	Isopropylbenzene	0.29	1.47	0.29	1.49	7.46	1.49	U				
108-67-8	1,3,5-Trimethylbenzene	0.45	2.23	0.45	2.26	11.30	2.26	U				
98-06-6	tert-butyl benzene	0.26	1.29	0.26	1.45	7.28	1.45	U				
95-63-6	1,2,4-Trimethylbenzene	0.43	2.14	0.43	2.17	10.87	2.17	U				
135-98-8	sec-butylbenzene	0.27	1.37	0.27	1.55	7.76	1.55	U				
541-73-1	1,3-Dichlorobenzene	0.43	2.14	0.43	2.66	13.30	2.66	U				
99-87-6	Isopropyltoluene	0.27	1.34	0.27	1.52	7.62	1.52	U				
100-44-7	Benzyl chloride	0.49	4.94	0.49	2.64	26.41	2.64	U				
106-46-7	1,4-Dichlorobenzene	0.86	8.57	0.86	5.32	53.19	5.32	U				
104-51-8	n-Butylbenzene	0.50	5.04	0.50	2.86	28.56	2.86	U				
95-50-1	1,2-Dichlorobenzene	0.84	8.40	0.84	5.21	52.15	5.21	U				
96-12-8	1,2-Dibromo-3-chlproppane	1.41	5.63	1.41	14.04	56.16	14.04	U				
120-82-1	1,2,4-Trichlorobenzene	0.87	8.65	0.87	6.63	66.28	6.63	U				
87-68-3	Hexachlorobutadiene	0.87	8.65	0.87	9.53	95.29	9.53	U				
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag					
Toluene-d8		10.000		% Rec.		Limits	*	= Out				
103												
70-130												

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 21

File: 1007021A.D	Date Sampled: 02/19/10	Time: 13:27
Description: STA-4C-5-REP	Date Received: 02/23/10	
Can/Tube#: 300	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/11/10	Time: 20:37
QC_Batch: 031110-MS1	Can Dilution Factor: 1.77	2
Air Volume: 200 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.46	2.33	0.61	2.37	11.88	3.12	J
74-87-3	Chloromethane	0.45	2.26	0.90	0.96	4.81	1.91	J
75-01-4	Vinyl chloride	0.46	2.30	0.46	1.21	6.07	1.21	U
74-83-9	Bromomethane	0.46	2.30	0.46	1.84	9.22	1.84	U
75-00-3	Chloroethane	0.46	2.30	0.50	1.25	6.27	1.37	J
64-17-5	Ethanol	1.52	7.61	7.53	2.96	14.82	14.65	J
75-69-4	Trichlorofluoromethane	0.46	2.30	0.46	2.67	13.35	2.67	U
75-05-8	Acetonitrile	0.90	4.51	0.90	1.57	7.83	1.57	U
67-64-1	Acetone	0.50	10.02	103.25	1.23	24.58	253.32	
4227-95-6	Methyl iodide	0.13	0.66	0.13	0.80	4.01	0.80	U
75-35-4	1,1-Dichloroethene	0.45	2.24	0.45	1.83	9.16	1.83	U
76-13-1	Freon 113	0.45	2.26	0.45	3.57	17.85	3.57	U
75-09-2	Dichloromethane	0.46	2.30	0.46	1.65	8.25	1.65	U
75-15-0	Carbon disulfide	0.38	1.89	0.38	1.22	6.09	1.23	J
156-60-5	trans-1,2-Dichloroethene	0.29	5.88	0.29	1.20	24.05	1.20	U
1634-04-4	Methyl tert butyl ether	0.30	6.01	0.30	1.12	22.36	1.12	U
75-34-3	1,1-Dichloroethane	0.45	2.24	0.45	1.87	9.36	1.87	U
108-05-4	Vinyl acetate	0.36	7.16	0.36	1.30	26.03	1.30	U
78-93-3	2-Butanone	0.41	2.07	36.01	1.26	6.31	109.64	
74-97-5	Bromochloromethane	0.22	1.09	0.22	1.18	5.95	1.18	U
78-83-1	Isobutyl alcohol	0.34	6.73	0.34	1.05	21.05	1.05	U
156-59-2	cis-1,2-Dichloroethene	0.46	2.28	0.46	1.87	9.34	1.87	U
594-20-7	2,2-Dichloropropane	0.36	7.25	0.38	1.73	34.59	1.73	U
67-66-3	Chloroform	0.45	2.26	29.08	2.28	11.38	146.62	
71-55-6	1,1,1-Trichloroethane	0.45	2.26	0.45	2.54	12.71	2.54	U
107-06-2	1,2-Dichloroethane	0.46	2.28	0.46	1.91	9.55	1.91	U
563-58-6	1,1-Dichloropropene	0.27	1.35	0.27	1.26	6.31	1.26	U
71-43-2	Benzene	0.46	2.28	1.20	1.50	7.53	3.97	J
56-23-5	Carbon tetrachloride	0.45	2.26	0.60	2.93	14.66	3.87	J
142-82-5	n-Heptane	0.25	1.24	1.43	1.04	5.24	6.04	
78-87-5	1,2-Dichloropropane	0.46	2.28	0.46	2.17	10.90	2.17	U
123-91-1	1,4 Dioxane	0.83	4.16	0.83	3.10	15.48	3.10	U
74-95-3	Dibromomethane	0.15	0.76	0.15	1.12	5.59	1.12	U
79-01-6	Trichloroethene	0.46	2.28	0.46	2.53	12.67	2.53	U
75-27-4	Bromodichloromethane	0.16	0.82	0.16	1.13	5.69	1.13	U
108-10-1	Methyl Isobutyl Ketone	0.31	1.54	0.31	1.30	6.52	1.31	J
10061-01-5	cis-1,3-Dichloropropene	0.47	2.35	0.47	2.20	10.99	2.20	U
108-88-3	Toluene	0.46	2.28	2.74	1.77	8.88	10.65	
10061-02-6	trans-1,3-Dichloropropene	0.46	2.30	0.46	2.16	10.79	2.16	U
79-00-5	1,1,2-Trichloroethane	0.45	2.26	0.45	2.54	12.71	2.54	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.29	1.44	6.34	1.22	6.10	26.83	
142-28-9	1,3-Dichloropropane	0.27	1.34	0.27	1.28	6.38	1.28	U
124-48-1	Dibromochlormethane	0.16	0.81	0.16	1.43	7.16	1.43	U
106-93-4	1,2-Dibromoethane	0.46	2.30	0.46	3.65	18.26	3.65	U
127-18-4	Tetrachloroethene	0.45	2.26	0.45	3.16	15.80	3.16	U
108-90-7	Chlorobenzene	0.45	2.26	0.45	2.15	10.73	2.15	U
630-20-6	1,1,1,2-Tetrachloroethane	0.17	0.84	0.17	1.19	5.96	1.19	U
100-41-4	Ethylbenzene	0.48	2.30	0.58	2.06	10.32	2.59	J
108-38-3	m & p-Xylene	0.91	4.56	4.43	4.09	20.44	19.87	J
100-42-5	Styrene	0.48	2.28	0.46	2.01	10.05	2.01	U
75-25-2	Bromoform	0.11	0.55	0.11	1.17	5.86	1.17	U
95-47-6	o-Xylene	0.45	2.26	2.04	2.02	10.12	9.14	J
79-34-5	1,1,2,2-Tetrachloroethane	0.45	2.26	0.45	3.20	15.99	3.20	U
96-18-4	1,2,3-Trichloropropane	0.20	1.00	0.20	1.25	6.22	1.25	U
103-65-1	n-Propylbenzene	0.31	1.53	0.35	1.55	7.77	1.77	J
98-82-8	Isopropylbenzene	0.31	1.55	2.89	1.57	7.86	14.65	
108-67-8	1,3,5-Trimethylbenzene	0.47	2.35	1.05	2.38	11.90	5.34	J
98-06-6	tert-butyl benzene	0.27	1.35	0.48	1.53	7.67	2.72	J
95-63-6	1,2,4-Trimethylbenzene	0.45	2.26	3.36	2.29	11.46	17.05	
135-98-8	sec-butylbenzene	0.29	1.44	0.29	1.63	8.18	1.63	U
541-73-1	1,3-Dichlorobenzene	0.45	2.26	0.45	2.80	14.01	2.80	U
99-87-6	Isopropyltoluene	0.28	1.42	0.28	1.60	8.02	1.60	U
100-44-7	Benzyl chloride	0.52	5.20	0.52	2.78	27.82	2.78	U
106-46-7	1,4-Dichlorobenzene	0.90	9.03	0.90	5.60	56.04	5.60	U
104-51-8	n-Butylbenzene	0.53	5.31	0.53	3.01	30.09	3.01	U
95-50-1	1,2-Dichlorobenzene	0.89	8.85	0.89	5.49	54.94	5.49	U
96-12-8	1,2-Dibromo-3-chloropropane	1.48	5.93	1.48	14.79	59.17	14.79	U
120-82-1	1,2,4-Trichlorobenzene	0.91	9.12	0.91	6.98	69.83	6.98	U
87-68-3	Hexachlorobutadiene	0.91	9.12	0.91	10.04	100.39	10.04	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag	
Toluene-d8		10.000		% Rec.		Limits	* = Out	
9.815      98      70-130								

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 22

File: 1007022A.D	Date Sampled: 02/19/10	Time: 13:27
Description: STA-4C-5-DUP	Date Received: 02/23/10	
Can/Tube#: 308	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/11/10	Time: 21:20
QC_Batch: 031110-MS1	Can Dilution Factor: 1.72	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Diochlorodifluoromethane	0.45	2.26	0.45	2.31	11.55	2.31	U
74-87-3	Chloromethane	0.44	2.19	0.44	0.94	4.68	0.94	U
75-01-4	Vinyl chloride	0.45	2.24	0.45	1.18	5.90	1.18	U
74-83-9	Bromomethane	0.45	2.24	0.45	1.79	8.96	1.79	U
75-00-3	Chloroethane	0.45	2.24	0.45	1.22	6.09	1.22	U
64-17-5	Ethanol	1.48	7.40	1.48	2.88	14.40	2.88	U
75-69-4	Trichlorofluoromethane	0.45	2.24	0.45	2.59	12.97	2.59	U
75-05-8	Acetonitrile	0.88	4.39	0.88	1.52	7.61	1.52	U
67-64-1	Acetone	0.49	9.74	95.66	1.19	23.89	234.72	
4227-95-6	Methyl iodide	0.13	0.65	0.13	0.78	3.89	0.78	U
75-35-4	1,1-Dichloroethene	0.43	2.18	0.43	1.78	8.90	1.78	U
76-13-1	Freon 113	0.44	2.19	0.44	3.47	17.35	3.47	U
75-09-2	Dichloromethane	0.45	2.24	0.45	1.60	8.02	1.60	U
75-15-0	Carbon disulfide	0.37	1.84	0.37	1.18	5.91	1.18	U
156-60-5	trans-1,2-Dichloroethene	0.29	5.71	0.29	1.17	23.37	1.17	U
1634-04-4	Methyl tert butyl ether	0.29	5.84	0.29	1.09	21.73	1.09	U
75-34-3	1,1-Dichloroethane	0.43	2.18	0.43	1.82	9.10	1.82	U
108-05-4	Vinyl acetate	0.35	6.96	0.35	1.26	25.30	1.26	U
78-93-3	2-Butanone	0.40	2.01	33.45	1.23	6.13	101.86	
74-97-5	Bromochloromethane	0.21	1.06	0.21	1.15	5.78	1.15	U
78-83-1	Isobutyl alcohol	0.33	6.54	0.33	1.02	20.45	1.02	U
156-59-2	cis-1,2-Dichloroethene	0.44	2.22	0.44	1.81	9.08	1.81	U
594-20-7	2,2-Dichloropropane	0.35	7.04	0.35	1.68	33.61	1.68	U
67-66-3	Chloroform	0.44	2.19	30.53	2.21	11.06	153.94	
71-55-6	1,1,1-Trichloroethane	0.44	2.19	0.44	2.47	12.35	2.47	U
107-06-2	1,2-Dichloroethane	0.44	2.22	0.44	1.85	9.28	1.85	U
563-58-6	1,1-Dichloropropene	0.26	1.31	0.26	1.22	6.13	1.22	U
71-43-2	Benzene	0.44	2.22	0.93	1.46	7.32	3.07	J
56-23-5	Carbon tetrachloride	0.44	2.19	0.60	2.85	14.24	3.89	J
142-82-5	n-Heptane	0.24	1.20	1.35	1.02	5.09	5.70	
78-87-5	1,2-Dichloropropane	0.44	2.22	0.44	2.11	10.59	2.11	U
123-91-1	1,4 Dioxane	0.81	4.04	0.81	3.01	15.04	3.01	U
74-95-3	Dibromomethane	0.15	0.74	0.15	1.09	5.43	1.09	U
79-01-6	Trichloroethene	0.44	2.22	0.44	2.46	12.31	2.46	U
75-27-4	Bromodichloromethane	0.16	0.80	0.16	1.10	5.53	1.10	U
108-10-1	Methyl Isobutyl Ketone	0.30	1.50	0.30	1.27	6.33	1.27	U
10061-01-5	cis-1,3-Dichloropropene	0.46	2.28	0.46	2.14	10.68	2.14	U
108-88-3	Toluene	0.44	2.22	0.58	1.72	8.63	2.24	J
10061-02-6	trans-1,3-Dichloropropene	0.45	2.24	0.45	2.10	10.48	2.10	U
79-00-5	1,1,2-Trichloroethane	0.44	2.19	0.44	2.47	12.35	2.47	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.28	1.40	7.95	1.19	5.93	33.62	
142-28-9	1,3-Dichloropropane	0.26	1.30	0.26	1.24	6.20	1.24	U
124-48-1	Dibromochloromethane	0.16	0.79	0.16	1.39	6.96	1.39	U
106-93-4	1,2-Dibromoethane	0.45	2.24	0.45	3.55	17.74	3.55	U
127-18-4	Tetrachloroethylene	0.44	2.19	0.44	3.07	15.35	3.07	U
108-90-7	Chlorobenzene	0.44	2.19	0.44	2.09	10.43	2.09	U
630-20-6	1,1,1,2-Tetrachloroethane	0.16	0.82	0.16	1.16	5.79	1.16	U
100-41-4	Ethylbenzene	0.45	2.24	0.45	2.01	10.03	2.01	U
108-38-3	m & p-Xylene	0.89	4.43	0.89	3.97	19.86	3.97	U
100-42-5	Styrene	0.44	2.22	0.44	1.95	9.76	1.95	U
75-25-2	Bromoform	0.11	0.53	0.11	1.13	5.69	1.13	U
95-47-6	o-Xylene	0.44	2.19	0.44	1.97	9.84	1.97	U
79-34-5	1,1,2,2-Tetrachloroethane	0.44	2.19	0.44	3.11	15.54	3.11	U
96-18-4	1,2,3-Trichloropropane	0.19	0.97	0.19	1.21	6.05	1.21	U
103-65-1	n-Propylbenzene	0.30	1.49	0.30	1.51	7.55	1.51	U
98-82-8	Isopropylbenzene	0.30	1.51	0.30	1.53	7.64	1.53	U
108-67-8	1,3,5-Trimethylbenzene	0.46	2.28	0.46	2.31	11.57	2.31	U
98-06-6	tert-butyl benzene	0.26	1.32	0.26	1.49	7.46	1.49	U
95-63-6	1,2,4-Trimethylbenzene	0.44	2.19	0.44	2.23	11.13	2.23	U
135-98-8	sec-butylbenzene	0.28	1.40	0.28	1.58	7.94	1.58	U
541-73-1	1,3-Dichlorobenzene	0.44	2.19	0.44	2.72	13.61	2.72	U
99-87-6	Isopropyltoluene	0.28	1.38	0.28	1.56	7.80	1.56	U
100-44-7	Benzyl chloride	0.51	5.06	0.51	2.70	27.04	2.70	U
106-46-7	1,4-Dichlorobenzene	0.88	8.77	0.88	5.45	54.45	5.45	U
104-51-8	n-Butylbenzene	0.52	5.16	0.52	2.92	29.24	2.92	U
95-50-1	1,2-Dichlorobenzene	0.86	8.60	0.86	5.34	53.39	5.34	U
96-12-8	1,2-Dibromo-3-chloropropane	1.44	5.76	1.44	14.37	57.50	14.37	U
120-82-1	1,2,4-Trichlorobenzene	0.89	8.86	0.89	6.79	67.86	6.79	U
87-68-3	Hexachlorobutadiene	0.89	8.86	0.89	9.76	97.56	9.76	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.002		100		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 23

File: 1007023A.D	Date Sampled: 02/19/10	Time: 13:45
Description: STA-4C-10-REP	Date Received: 02/23/10	
Can/Tube#: 344	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/12/10	Time: 14:43
QC_Batch: 031210-MS1	Can Dilution Factor: 2.33	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.61	3.06	0.61	3.12	15.64	3.12	U
74-87-3	Chloromethane	0.59	2.97	0.59	1.27	6.34	1.27	U
75-01-4	Vinyl chloride	0.61	3.03	0.61	1.60	7.99	1.60	U
74-83-9	Bromomethane	0.61	3.03	0.61	2.43	12.14	2.43	U
75-00-3	Chloroethane	0.61	3.03	0.61	1.65	8.25	1.65	U
64-17-5	Ethanol	2.00	10.02	2.00	3.90	19.50	3.90	U
75-69-4	Trichlorofluoromethane	0.61	3.03	0.61	3.52	17.58	3.52	U
75-05-8	Acetonitrile	1.19	5.94	1.19	2.06	10.31	2.06	U
67-64-1	Acetone	0.66	13.19	339.91	1.62	32.36	833.99	
4227-95-6	Methyl iodide	0.17	0.87	0.20	1.05	5.27	1.22	J
75-35-4	1,1-Dichloroethene	0.59	2.95	0.59	2.41	12.06	2.41	U
76-13-1	Freon 113	0.59	2.97	0.59	4.70	23.50	4.70	U
75-09-2	Dichloromethane	0.61	3.03	0.61	2.17	10.86	2.17	U
75-15-0	Carbon disulfide	0.50	2.49	0.57	1.60	8.01	1.83	J
156-60-5	trans-1,2-Dichloroethene	0.39	7.74	0.39	1.58	31.65	1.58	U
1634-04-4	Methyl tert butyl ether	0.40	7.91	0.40	1.47	29.43	1.47	U
75-34-3	1,1-Dichloroethane	0.59	2.95	0.59	2.46	12.32	2.46	U
108-05-4	Vinyl acetate	0.47	9.42	0.47	1.71	34.27	1.71	U
78-93-3	2-Butanone	0.55	2.73	96.77	1.66	8.30	294.64	
74-97-5	Bromochloromethane	0.29	1.43	0.29	1.56	7.83	1.56	U
78-83-1	Isobutyl alcohol	0.44	8.85	0.44	1.39	27.71	1.39	U
156-59-2	cis-1,2-Dichloroethene	0.60	3.01	0.60	2.46	12.30	2.46	U
594-20-7	2,2-Dichloropropane	0.48	9.54	0.48	2.28	45.53	2.28	U
67-66-3	Chloroform	0.59	2.97	36.66	3.00	14.98	184.85	
71-55-6	1,1,1-Trichloroethane	0.59	2.97	0.59	3.35	16.74	3.35	U
107-06-2	1,2-Dichloroethane	0.60	3.01	0.60	2.51	12.57	2.51	U
563-58-6	1,1-Dichloropropene	0.35	1.77	0.35	1.65	8.30	1.65	U
71-43-2	Benzene	0.60	3.01	1.52	1.98	9.91	5.02	J
56-23-5	Carbon tetrachloride	0.59	2.97	0.59	3.86	19.29	3.86	U
142-82-5	n-Heptane	0.33	1.63	2.52	1.38	6.90	10.65	
78-87-5	1,2-Dichloropropane	0.60	3.01	0.60	2.86	14.34	2.86	U
123-91-1	1,4 Dioxane	1.10	5.48	1.10	4.07	20.37	4.07	U
74-95-3	Dibromomethane	0.20	1.00	0.20	1.48	7.35	1.48	U
79-01-6	Trichloroethene	0.60	3.01	0.60	3.33	16.68	3.33	U
75-27-4	Bromodichloromethane	0.22	1.08	0.22	1.49	7.49	1.49	U
108-10-1	Methyl Isobutyl Ketone	0.41	2.03	0.41	1.72	8.58	1.72	U
10061-01-5	cis-1,3-Dichloropropene	0.62	3.09	0.62	2.89	14.47	2.89	U
108-88-3	Toluene	0.60	3.01	1.67	2.33	11.69	6.51	J
10061-02-6	trans-1,3-Dichloropropene	0.61	3.03	0.61	2.84	14.20	2.84	U
79-00-5	1,1,2-Trichloroethane	0.59	2.97	0.59	3.35	16.74	3.35	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.38	1.90	11.79	1.61	8.04	49.90	
142-28-9	1,3-Dichloropropane	0.35	1.76	0.35	1.68	8.39	1.68	U
124-48-1	Dibromochloromethane	0.21	1.07	0.21	1.88	9.43	1.88	U
106-93-4	1,2-Dibromoethane	0.61	3.03	0.61	4.81	24.04	4.81	U
127-18-4	Tetrachloroethene	0.59	2.97	0.59	4.16	20.80	4.16	U
108-90-7	Chlorobenzene	0.59	2.97	0.59	2.83	14.13	2.83	U
630-20-6	1,1,1,2-Tetrachloroethane	0.22	1.11	0.22	1.57	7.84	1.57	U
100-41-4	Ethylbenzene	0.61	3.03	0.61	2.72	13.58	2.72	U
108-38-3	m & p-Xylene	1.20	6.00	1.20	5.38	26.91	5.38	U
100-42-5	Styrene	0.60	3.01	0.60	2.64	13.23	2.64	U
75-25-2	Bromoform	0.14	0.72	0.14	1.54	7.71	1.54	U
95-47-6	o-Xylene	0.59	2.97	0.59	2.66	13.32	2.66	U
79-34-5	1,1,2,2-Tetrachloroethane	0.59	2.97	0.59	4.21	21.05	4.21	U
96-18-4	1,2,3-Trichloropropane	0.26	1.32	0.26	1.64	8.19	1.64	U
103-65-1	n-Propylbenzene	0.40	2.02	0.40	2.04	10.23	2.04	U
98-82-8	Isopropylbenzene	0.41	2.04	0.41	2.07	10.35	2.07	U
108-67-8	1,3,5-Trimethylbenzene	0.62	3.09	0.62	3.13	15.67	3.13	U
98-06-6	tert-butyl benzene	0.36	1.78	0.36	2.01	10.10	2.01	U
95-63-6	1,2,4-Trimethylbenzene	0.59	2.97	0.59	3.02	15.08	3.02	U
135-98-8	sec-butylbenzene	0.38	1.90	0.38	2.15	10.76	2.15	U
541-73-1	1,3-Dichlorobenzene	0.59	2.97	0.59	3.69	18.44	3.69	U
99-87-6	Isopropyltoluene	0.37	1.86	0.37	2.11	10.56	2.11	U
100-44-7	Benzyl chloride	0.69	6.85	0.69	3.66	36.62	3.66	U
106-46-7	1,4-Dichlorobenzene	1.19	11.88	1.19	7.38	73.77	7.38	U
104-51-8	n-Butylbenzene	0.70	6.99	0.70	3.96	39.61	3.96	U
95-50-1	1,2-Dichlorobenzene	1.17	11.65	1.17	7.23	72.32	7.23	U
96-12-8	1,2-Dibromo-3-chloropropane	1.95	7.81	1.95	19.47	77.89	19.47	U
120-82-1	1,2,4-Trichlorobenzene	1.20	12.00	1.20	9.19	91.92	9.19	U
87-68-3	Hexachlorobutadiene	1.20	12.00	1.20	13.22	132.16	13.22	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag	
Toluene-d8		10.000		% Rec.		Limits	*	= Out
105      70-130								

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

# ENVIRONMENTAL Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 24

File: 1007024A.D

Date Sampled: 02/19/10 Time: 13:45

Description: STA-4C-10-DUP

Date Received: 02/23/10

Can/Tube#: 323A

Date Extracted:

Sam\_Type: SA

Date Analyzed:

QC\_Batch: 031410-MS1

Can Dilution Factor:

Air Volume: 200 ml

Time: 14:19

2.38 2

Not Detected Flag:

U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.62	3.13	0.62	3.19	15.98	3.19	U
74-87-3	Chloromethane	0.61	3.03	2.15	1.29	6.47	4.58	J
75-01-4	Vinyl chloride	0.62	3.09	0.62	1.63	8.17	1.63	U
74-83-9	Bromomethane	0.62	3.09	0.62	2.48	12.40	2.48	U
75-00-3	Chloroethane	0.62	3.09	0.62	1.69	8.43	1.69	U
64-17-5	Ethanol	2.05	10.23	2.05	3.98	19.92	3.98	U
75-69-4	Trichlorofluoromethane	0.62	3.09	0.62	3.59	17.95	3.59	U
75-05-8	Acetonitrile	1.21	6.07	1.21	2.11	10.53	2.11	U
67-64-1	Acetone	0.67	13.47	63.29	1.65	33.05	155.28	
4227-95-6	Methyl iodide	0.18	0.89	0.18	1.08	5.39	1.08	U
75-35-4	1,1-Dichloroethene	0.60	3.01	0.60	2.46	12.32	2.46	U
76-13-1	Freon 113	0.61	3.03	0.61	4.80	24.00	4.80	U
75-09-2	Dichloromethane	0.62	3.09	0.62	2.22	11.09	2.22	U
75-15-0	Carbon disulfide	0.51	2.55	1.28	1.63	8.18	4.12	J
156-60-5	trans-1,2-Dichloroethene	0.40	7.90	0.40	1.62	32.33	1.62	U
1634-04-4	Methyl tert butyl ether	0.40	8.08	0.40	1.50	30.06	1.50	U
75-34-3	1,1-Dichloroethane	0.60	3.01	0.60	2.51	12.59	2.51	U
108-05-4	Vinyl acetate	0.48	9.63	0.48	1.75	35.00	1.75	U
78-93-3	2-Butanone	0.56	2.78	10.72	1.70	8.48	32.64	
74-97-5	Bromochloromethane	0.29	1.46	0.29	1.59	8.00	1.59	U
78-83-1	Isobutyl alcohol	0.45	9.04	0.45	1.42	28.30	1.42	U
156-59-2	cis-1,2-Dichloroethene	0.61	3.07	0.61	2.51	12.56	2.51	U
594-20-7	2,2-Dichloropropane	0.49	9.75	0.49	2.33	46.51	2.33	U
67-66-3	Chloroform	0.61	3.03	42.43	3.06	15.30	213.93	
71-55-6	1,1,1-Trichloroethane	0.61	3.03	0.61	3.42	17.09	3.42	U
107-06-2	1,2-Dichloroethane	0.61	3.07	0.61	2.56	12.84	2.56	U
583-58-6	1,1-Dichloropropene	0.36	1.81	0.36	1.69	8.48	1.69	U
71-43-2	Benzene	0.61	3.07	1.69	2.02	10.13	5.58	J
56-23-5	Carbon tetrachloride	0.61	3.03	0.66	3.94	19.71	4.27	J
142-82-5	n-Heptane	0.33	1.67	1.88	1.40	7.05	7.97	
78-87-5	1,2-Dichloropropane	0.61	3.07	0.61	2.92	14.65	2.92	U
123-91-1	1,4 Dioxane	1.12	5.59	1.12	4.16	20.81	4.16	U
74-95-3	Dibromomethane	0.21	1.02	0.21	1.51	7.51	1.51	U
79-01-6	Trichloroethene	0.61	3.07	0.61	3.40	17.04	3.40	U
75-27-4	Bromodichloromethane	0.22	1.11	0.22	1.52	7.66	1.52	U
108-10-1	Methyl Isobutyl Ketone	0.41	2.07	0.41	1.75	8.76	1.75	U
10061-01-5	cis-1,3-Dichlcropopene	0.63	3.15	0.63	2.96	14.78	2.96	U
108-88-3	Toluene	0.61	3.07	1.35	2.38	11.94	5.24	J
10061-02-6	trans-1,3-Dichloropropene	0.62	3.09	0.62	2.90	14.50	2.90	U
79-00-5	1,1,2-Trichloroethane	0.61	3.03	0.61	3.42	17.09	3.42	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.39	1.94	0.39	1.64	8.21	1.64	U
142-28-9	1,3-Dichloropropane	0.36	1.80	0.36	1.72	8.57	1.72	U
124-48-1	Dibromochloromethane	0.22	1.09	0.22	1.92	9.63	1.92	U
106-93-4	1,2-Dibromoethane	0.62	3.09	0.62	4.91	24.55	4.91	U
127-18-4	Tetrachloroethene	0.61	3.03	0.61	4.25	21.25	4.25	U
108-90-7	Chlorobenzene	0.61	3.03	0.61	2.89	14.43	2.89	U
630-20-6	1,1,1,2-Tetrachloroethane	0.23	1.13	0.23	1.61	8.01	1.61	U
100-41-4	Ethylbenzene	0.62	3.09	0.62	2.78	13.88	2.78	U
108-38-3	m & p-Xylene	1.23	6.13	1.23	5.50	27.49	5.50	U
100-42-5	Styrene	0.61	3.07	0.61	2.70	13.51	2.70	U
75-25-2	Bromoform	0.15	0.74	0.15	1.57	7.87	1.57	U
95-47-6	o-Xylene	0.61	3.03	0.61	2.72	13.61	2.72	U
79-34-5	1,1,2,2-Tetrachloroethane	0.61	3.03	0.61	4.30	21.50	4.30	U
96-18-4	1,2,3-Trichloropropane	0.27	1.34	0.27	1.68	8.37	1.68	U
103-65-1	n-Propylbenzene	0.41	2.06	0.41	2.08	10.45	2.08	U
98-82-8	Isopropylbenzene	0.42	2.08	0.42	2.11	10.57	2.11	U
108-67-8	1,3,5-Trimethylbenzene	0.63	3.15	0.63	3.20	16.01	3.20	U
98-06-6	tert-butyl benzene	0.36	1.82	0.36	2.06	10.32	2.06	U
95-63-6	1,2,4-Trimethylbenzene	0.61	3.03	0.61	3.08	15.40	3.08	U
135-98-8	sec-butylbenzene	0.39	1.94	0.39	2.19	10.99	2.19	U
541-73-1	1,3-Dichlorobenzene	0.61	3.03	0.61	3.77	18.84	3.77	U
99-87-6	Isopropylcyclohexene	0.38	1.90	0.38	2.16	10.79	2.16	U
100-44-7	Benzyl chloride	0.70	7.00	0.70	3.74	37.41	3.74	U
106-46-7	1,4-Dichlorobenzene	1.21	12.14	1.21	7.53	75.35	7.53	U
104-51-8	n-Butylbenzene	0.71	7.14	0.71	4.05	40.46	4.05	U
95-50-1	1,2-Dichlorobenzene	1.19	11.90	1.19	7.39	73.87	7.39	U
96-12-8	1,2-Dibromo-3-chloropropane	1.99	7.97	1.99	19.89	79.56	19.89	U
120-82-1	1,2,4-Trichlorobenzene	1.23	12.26	1.23	9.39	93.89	9.39	U
87-68-3	Hexachlorobutadiene	1.23	12.26	1.23	13.50	134.99	13.50	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		9.820		96	* = Out	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 25

File: 1007025A.D	Date Sampled: 02/19/10	Time: 14:15
Description: STA-4C-5B	Date Received: 02/23/10	
Can/Tube#: 311	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 12:55
QC_Batch: 031410-MS1	Can Dilution Factor: 1.00	
Air Volume: 1000 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.05	0.26	0.05	0.27	1.34	0.27	U
74-87-3	Chloromethane	0.05	0.26	0.36	0.11	0.54	0.76	
75-01-4	Vinyl chloride	0.05	0.26	0.05	0.14	0.89	0.14	U
74-83-9	Bromomethane	0.05	0.26	0.05	0.21	1.04	0.21	U
75-00-3	Chloroethane	0.05	0.26	0.05	0.14	0.71	0.14	U
64-17-5	Ethanol	0.17	0.86	0.47	0.33	1.67	0.92	J
75-69-4	Trichlorofluoromethane	0.05	0.26	0.05	0.30	1.51	0.30	U
75-05-8	Acetonitrile	0.10	0.51	0.10	0.18	0.89	0.18	U
67-64-1	Acetone	0.06	1.13	1.75	0.14	2.78	4.30	
4227-95-6	Methyl iodide	0.02	0.08	0.02	0.09	0.45	0.09	U
75-35-4	1,1-Dichloroethene	0.05	0.25	0.05	0.21	1.04	0.21	U
76-13-1	Freon 113	0.05	0.26	0.05	0.40	2.02	0.40	U
75-09-2	Dichloromethane	0.05	0.26	0.05	0.19	0.93	0.19	U
75-15-0	Carbon disulfide	0.04	0.21	0.04	0.14	0.69	0.14	U
156-60-5	trans-1,2-Dichloroethene	0.03	0.66	0.03	0.14	2.72	0.14	U
1634-04-4	Methyl tert butyl ether	0.03	0.68	0.03	0.13	2.53	0.13	U
75-34-3	1,1-Dichloroethane	0.05	0.25	0.05	0.21	1.06	0.21	U
108-05-4	Vinyl acetate	0.04	0.81	0.04	0.15	2.94	0.15	U
78-93-3	2-Butanone	0.05	0.23	0.59	0.14	0.71	1.79	
74-97-5	Bromochloromethane	0.02	0.12	0.02	0.13	0.67	0.13	U
78-83-1	Isobutyl alcohol	0.04	0.76	0.04	0.12	2.38	0.12	U
156-59-2	cis-1,2-Dichloroethene	0.05	0.26	0.05	0.21	1.06	0.21	U
594-20-7	2,2-Dichloropropane	0.04	0.82	0.04	0.20	3.91	0.20	U
67-66-3	Chloroform	0.05	0.26	0.05	0.26	1.29	0.26	U
71-55-6	1,1,1-Trichloroethane	0.05	0.26	0.05	0.29	1.44	0.29	U
107-06-2	1,2-Dichloroethane	0.05	0.26	0.05	0.22	1.08	0.22	U
563-58-6	1,1-Dichloropropene	0.03	0.15	0.03	0.14	0.71	0.14	U
71-43-2	Benzene	0.05	0.26	0.05	0.17	0.85	0.17	U
56-23-5	Carbon tetrachloride	0.05	0.26	0.05	0.33	1.66	0.33	U
142-82-5	n-Heptane	0.03	0.14	0.03	0.12	0.59	0.12	U
78-87-5	1,2-Dichloropropane	0.05	0.26	0.05	0.25	1.23	0.25	U
123-91-1	1,4 Dioxane	0.09	0.47	0.09	0.35	1.75	0.35	U
74-95-3	Dibromomethane	0.02	0.09	0.02	0.13	0.63	0.13	U
79-01-6	Trichloroethene	0.05	0.26	0.05	0.29	1.43	0.29	U
75-27-4	Bromodichloromethane	0.02	0.09	0.02	0.13	0.64	0.13	U
108-10-1	Methyl Isobutyl Ketone	0.03	0.17	0.03	0.15	0.74	0.15	U
10061-01-5	cis-1,3-Dichloropropene	0.05	0.27	0.05	0.25	1.24	0.25	U
108-88-3	Toluene	0.05	0.26	0.06	0.20	1.00	0.24	J
10061-02-6	trans-1,3-Dichloropropene	0.05	0.26	0.05	0.24	1.22	0.24	U
79-00-5	1,1,2-Trichloroethane	0.05	0.26	0.05	0.29	1.44	0.29	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.03	0.16	0.03	0.14	0.69	0.14	J
142-28-9	1,3-Dichloropropane	0.03	0.15	0.03	0.14	0.72	0.14	U
124-48-1	Dibromochloromethane	0.02	0.09	0.02	0.16	0.81	0.16	U
106-93-4	1,2-Dibromoethane	0.05	0.26	0.05	0.41	2.06	0.41	U
127-18-4	Tetrachloroethene	0.05	0.26	0.05	0.36	1.79	0.36	U
108-90-7	Chlorobenzene	0.05	0.26	0.05	0.24	1.21	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.10	0.02	0.13	0.67	0.13	U
100-41-4	Ethylbenzene	0.05	0.26	0.05	0.23	1.17	0.23	U
108-38-3	m & p-Xylene	0.10	0.52	0.10	0.46	2.31	0.46	U
100-42-5	Styrene	0.05	0.26	0.05	0.23	1.14	0.23	U
75-25-2	Bromoform	0.01	0.06	0.01	0.13	0.66	0.13	U
95-47-6	o-Xylene	0.05	0.26	0.05	0.23	1.14	0.23	U
79-34-5	1,1,2,2-Tetrachloroethane	0.05	0.26	0.05	0.36	1.81	0.36	U
96-18-4	1,2,3-Trichloropropane	0.02	0.11	0.02	0.14	0.70	0.14	U
103-65-1	n-Propylbenzene	0.03	0.17	0.03	0.18	0.88	0.18	U
98-82-8	Isopropylbenzene	0.04	0.18	0.04	0.18	0.89	0.18	U
108-67-8	1,3,5-Trimethylbenzene	0.05	0.27	0.05	0.27	1.35	0.27	U
98-06-6	tert-butyl benzene	0.03	0.15	0.03	0.17	0.87	0.17	U
95-63-6	1,2,4-Trimethylbenzene	0.05	0.26	0.05	0.26	1.29	0.28	J
135-98-8	sec-butylbenzene	0.03	0.16	0.03	0.18	0.92	0.18	U
541-73-1	1,3-Dichlorobenzene	0.05	0.26	0.05	0.32	1.58	0.32	U
99-87-6	Isopropyltoluene	0.03	0.16	0.03	0.18	0.91	0.18	U
100-44-7	Benzyl chloride	0.06	0.59	0.06	0.31	3.14	0.31	U
106-46-7	1,4-Dichlorobenzene	0.10	1.02	0.10	0.63	6.33	0.63	U
104-51-8	n-Butylbenzene	0.06	0.60	0.06	0.34	3.40	0.34	U
95-50-1	1,2-Dichlorobenzene	0.10	1.00	0.10	0.62	6.21	0.62	U
96-12-8	1,2-Dibromo-3-chloropropane	0.17	0.67	0.17	1.67	6.69	1.67	U
120-82-1	1,2,4-Trichlorobenzene	0.10	1.03	0.10	0.79	7.89	0.79	U
87-68-3	Hexachlorobutadiene	0.10	1.03	0.10	1.13	11.34	1.13	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC	Flag	
Toluene-d8		10.000		% Rec.		Limits	* = Out	
101      70-130								

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 26

File: 1007026A.D

Date Sampled: 02/19/10 Time: 15:18

Description: STA-4W-5

Date Received: 02/23/10

Can/Tube#: 320

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/12/10

QC\_Batch: 031210-MS1

Can Dilution Factor: 1.78

Air Volume: 200 ml

Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.47	2.34	0.50	2.39	11.95	2.53	J
74-87-3	Chloromethane	0.45	2.27	0.68	0.97	4.84	1.46	J
75-01-4	Vinyl chloride	0.46	2.31	0.46	1.22	6.11	1.22	U
74-83-9	Bromomethane	0.46	2.31	0.46	1.85	9.27	1.85	U
75-00-3	Chloroethane	0.46	2.31	0.46	1.26	6.30	1.26	U
64-17-5	Ethanol	1.53	7.65	6.99	2.98	14.90	13.60	J
75-69-4	Trichlorofluoromethane	0.46	2.31	0.46	2.69	13.43	2.69	U
75-05-8	Acetonitrile	0.91	4.54	0.91	1.58	7.88	1.58	U
67-64-1	Acetone	0.50	10.07	100.40	1.24	24.72	246.33	
4227-95-6	Methyl iodide	0.13	0.67	0.13	0.81	4.03	0.81	U
75-35-4	1,1-Dichloroethene	0.45	2.25	0.45	1.84	9.21	1.84	U
76-13-1	Freon 113	0.45	2.27	0.45	3.59	17.95	3.59	U
75-09-2	Dichloromethane	0.46	2.31	0.46	1.66	8.30	1.66	U
75-15-0	Carbon disulfide	0.38	1.90	0.38	1.22	6.12	1.22	U
156-60-5	trans-1,2-Dichloroethene	0.30	5.91	0.30	1.21	24.18	1.21	U
1634-04-4	Methyl tert butyl ether	0.30	6.04	0.30	1.12	22.48	1.12	U
75-34-3	1,1-Dichloroethane	0.45	2.25	0.45	1.88	9.41	1.88	U
108-05-4	Vinyl acetate	0.36	7.20	0.36	1.31	26.18	1.31	U
78-93-3	2-Butanone	0.42	2.08	36.34	1.27	6.34	110.64	
74-97-5	Bromochloromethane	0.22	1.09	0.22	1.19	5.98	1.19	U
78-83-1	Isobutyl alcohol	0.34	6.76	0.34	1.06	21.17	1.06	U
156-59-2	cis-1,2-Dichloroethene	0.46	2.30	0.46	1.88	9.40	1.88	U
594-20-7	2,2-Dichloropropane	0.36	7.29	0.36	1.74	34.78	1.74	U
67-66-3	Chloroform	0.45	2.27	22.09	2.29	11.44	111.38	
71-55-6	1,1,1-Trichloroethane	0.45	2.27	0.45	2.56	12.79	2.56	U
107-06-2	1,2-Dichloroethane	0.46	2.30	0.46	1.92	9.60	1.92	U
563-58-6	1,1-Dichloropropene	0.27	1.35	0.27	1.26	6.34	1.26	U
71-43-2	Benzene	0.46	2.30	1.27	1.51	7.57	4.20	J
56-23-5	Carbon tetrachloride	0.45	2.27	0.68	2.95	14.74	4.39	J
142-82-5	n-Heptane	0.25	1.25	0.91	1.05	5.27	3.83	J
78-87-5	1,2-Dichloropropane	0.46	2.30	0.46	2.19	10.96	2.19	U
123-91-1	1,4 Dioxane	0.84	4.18	0.84	3.11	15.56	3.11	U
74-95-3	Dibromomethane	0.15	0.77	0.15	1.13	5.62	1.13	U
79-01-6	Trichloroethene	0.46	2.30	0.46	2.54	12.74	2.54	U
75-27-4	Bromodichloromethane	0.16	0.83	0.16	1.14	5.73	1.14	U
108-10-1	Methyl Isobutyl Ketone	0.31	1.55	0.32	1.31	6.55	1.37	J
10061-01-5	cis-1,3-Dichloropropene	0.47	2.36	0.47	2.21	11.06	2.21	U
108-88-3	Toluene	0.46	2.30	1.35	1.78	8.93	5.26	J
10061-02-6	trans-1,3-Dichloropropene	0.46	2.31	0.46	2.17	10.85	2.17	U
79-03-5	1,1,2-Trichloroethane	0.45	2.27	0.45	2.56	12.79	2.56	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.29	1.45	4.74	1.23	6.14	20.07	
142-28-9	1,3-Dichloropropane	0.27	1.34	0.27	1.28	6.41	1.28	U
124-48-1	Dibromochloromethane	0.16	0.82	0.16	1.44	7.20	1.44	U
106-93-4	1,2-Dibromoethane	0.46	2.31	0.46	3.67	18.36	3.67	U
127-18-4	Tetrachloroethylene	0.45	2.27	0.45	3.18	15.89	3.18	U
108-90-7	Chlorobenzene	0.45	2.27	0.45	2.16	10.79	2.16	U
630-20-6	1,1,1,2-Tetrachloroethane	0.17	0.85	0.17	1.20	5.99	1.20	U
100-41-4	Ethylbenzene	0.46	2.31	0.46	2.08	10.38	2.08	U
108-38-3	m & p-Xylene	0.92	4.58	0.92	4.11	20.56	4.11	U
100-42-5	Styrene	0.46	2.30	0.46	2.02	10.10	2.02	U
75-25-2	Bromoform	0.11	0.55	0.11	1.17	5.89	1.17	U
95-47-6	o-Xylene	0.45	2.27	0.45	2.04	10.18	2.04	U
79-34-5	1,1,2,2-Tetrachloroethane	0.45	2.27	0.45	3.22	16.08	3.22	U
96-18-4	1,2,3-Trichloropropane	0.20	1.01	0.20	1.25	6.26	1.25	U
103-65-1	n-Propylbenzene	0.31	1.54	0.31	1.58	7.82	1.58	U
98-82-8	Isopropylbenzene	0.31	1.56	0.31	1.58	7.91	1.58	U
108-67-8	1,3,5-Trimethylbenzene	0.47	2.36	0.47	2.39	11.97	2.39	U
98-06-6	tert-butyl benzene	0.27	1.36	0.27	1.54	7.72	1.54	U
95-63-6	1,2,4-Trimethylbenzene	0.45	2.27	0.45	2.30	11.52	2.30	U
135-98-8	sec-butylbenzene	0.29	1.45	0.29	1.64	8.22	1.64	U
541-73-1	1,3-Dichlorobenzene	0.45	2.27	0.45	2.82	14.09	2.82	U
99-87-6	Isopropyltoluene	0.28	1.42	0.28	1.61	8.07	1.61	U
100-44-7	Benzyl chloride	0.52	5.23	0.52	2.80	27.98	2.80	U
106-46-7	1,4-Dichlorobenzene	0.91	9.08	0.91	5.64	56.35	5.64	U
104-51-8	n-Butylbenzene	0.53	5.34	0.53	3.03	30.26	3.03	U
95-50-1	1,2-Dichlorobenzene	0.89	8.90	0.89	5.52	55.25	5.52	U
96-12-8	1,2-Dibromo-3-chloropropane	1.49	5.96	1.49	14.88	59.50	14.88	U
120-82-1	1,2,4-Trichlorobenzene	0.92	9.17	0.92	7.02	70.22	7.02	U
87-68-3	Hexachlorobutadiene	0.92	9.17	0.92	10.10	100.96	10.10	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		11.014		110		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 27

File: 1007027A.D	Date Sampled: 02/19/10	Time: 16:18
Description: STA-4S-5	Date Received: 02/23/10	
Can/Tube#: 341	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/12/10	Time: 17:29
QC_Batch: 031210-MS1	Can Dilution Factor: 1.43	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.38	1.88	0.52	1.92	9.60	2.64	J
74-87-3	Chloromethane	0.36	1.82	2.31	0.78	3.89	4.94	
75-01-4	Vinyl chloride	0.37	1.86	0.37	0.98	4.91	0.98	U
74-83-9	Bromomethane	0.37	1.86	0.37	1.49	7.45	1.49	U
75-00-3	Chloroethane	0.37	1.86	0.37	1.01	5.06	1.01	U
64-17-5	Ethanol	1.23	6.15	2.31	2.39	11.97	4.49	J
75-69-4	Trichlorofluoromethane	0.37	1.86	0.37	2.16	10.79	2.18	U
75-05-8	Acetonitrile	0.73	3.65	0.73	1.27	6.33	1.27	U
67-64-1	Acetone	0.40	8.09	163.53	0.99	19.86	401.24	
4227-95-6	Methyl iodide	0.11	0.54	0.11	0.65	3.24	0.65	U
75-35-4	1,1-Dichloroethene	0.36	1.81	0.36	1.48	7.40	1.48	U
76-13-1	Freon 113	0.36	1.82	0.36	2.88	14.42	2.88	U
75-09-2	Dichloromethane	0.37	1.86	0.37	1.33	6.67	1.33	U
75-15-0	Carbon disulfide	0.31	1.53	0.74	0.98	4.92	2.38	J
156-60-5	trans-1,2-Dichloroethene	0.24	4.75	0.24	0.97	19.43	0.97	U
1634-04-4	Methyl tert butyl ether	0.24	4.85	0.24	0.90	18.06	0.90	U
75-34-3	1,1-Dichloroethane	0.36	1.81	0.36	1.51	7.56	1.51	U
108-05-4	Vinyl acetate	0.29	5.78	0.29	1.05	21.03	1.05	U
78-93-3	2-Butanone	0.33	1.87	57.89	1.02	5.09	176.26	
74-97-5	Bromochloromethane	0.18	0.88	0.18	0.96	4.81	0.96	U
78-83-1	Isobutyl alcohol	0.27	5.43	0.27	0.85	17.00	0.85	U
156-59-2	cis-1,2-Dichloroethene	0.37	1.84	0.37	1.51	7.55	1.51	U
594-20-7	2,2-Dichloropropane	0.29	5.86	0.29	1.40	27.94	1.40	U
67-66-3	Chloroform	0.36	1.82	20.46	1.84	9.19	103.16	
71-55-6	1,1,1-Trichloroethane	0.36	1.82	0.36	2.05	10.27	2.05	U
107-06-2	1,2-Dichloroethane	0.37	1.84	0.37	1.54	7.71	1.54	U
563-58-6	1,1-Dichloropropene	0.22	1.09	0.22	1.02	5.09	1.02	U
71-43-2	Benzene	0.37	1.84	4.47	1.21	6.08	14.75	
56-23-5	Carbon tetrachloride	0.36	1.82	0.48	2.37	11.84	3.09	J
142-82-5	n-Heptane	0.20	1.00	2.02	0.84	4.24	8.57	
78-87-5	1,2-Dichloropropane	0.37	1.84	0.37	1.76	8.80	1.76	U
123-91-1	1,4 Dioxane	0.67	3.36	0.67	2.50	12.50	2.50	U
74-95-3	Dibromomethane	0.12	0.61	0.12	0.91	4.51	0.91	U
79-01-6	Trichloroethene	0.37	1.84	1.11	2.04	10.24	6.16	J
75-27-4	Bromodichloromethane	0.13	0.66	0.13	0.91	4.60	0.91	U
108-10-1	Methyl Isobutyl Ketone	0.25	1.24	0.32	1.05	5.26	1.37	J
10061-01-5	cis-1,3-Dichloropropene	0.38	1.89	0.38	1.78	8.88	1.78	U
108-88-3	Toluene	0.37	1.84	3.89	1.43	7.17	15.13	
10061-02-6	trans-1,3-Dichloropropene	0.37	1.86	0.37	1.74	8.71	1.74	U
79-00-5	1,1,2-Trichloroethane	0.36	1.82	0.36	2.05	10.27	2.05	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.23	1.17	7.69	0.99	4.93	32.52	
142-28-9	1,3-Dichloropropane	0.22	1.08	0.22	1.03	5.15	1.03	U
124-48-1	Dibromochloromethane	0.13	0.66	0.13	1.15	5.79	1.15	U
106-93-4	1,2-Dibromoethane	0.37	1.86	0.37	2.95	14.75	2.95	U
127-18-4	Tetrachloroethene	0.36	1.82	0.36	2.55	12.77	2.55	U
108-90-7	Chlorobenzene	0.36	1.82	0.36	1.73	8.67	1.73	U
630-20-6	1,1,1,2-Tetrachloroethane	0.14	0.68	0.14	0.97	4.81	0.97	U
100-41-4	Ethylbenzene	0.37	1.86	0.58	1.67	8.34	2.62	J
108-38-3	m & p-Xylene	0.74	3.68	2.33	3.30	16.51	10.47	J
100-42-5	Styrene	0.37	1.84	0.37	1.62	8.12	1.62	U
75-25-2	Bromoform	0.09	0.44	0.09	0.94	4.73	0.94	U
95-47-6	o-Xylene	0.36	1.82	0.92	1.64	8.18	4.11	J
79-34-5	1,1,2,2-Tetrachloroethane	0.38	1.82	0.36	2.58	12.92	2.58	U
96-18-4	1,2,3-Trichloropropane	0.16	0.81	0.16	1.01	5.03	1.01	U
103-65-1	n-Propylbenzene	0.25	1.24	0.25	1.25	6.28	1.25	U
98-82-8	Isopropylbenzene	0.25	1.25	1.36	1.27	6.35	6.88	
108-67-8	1,3,5-Trimethylbenzene	0.38	1.89	0.38	1.92	9.62	1.92	U
98-06-6	tert-butyl benzene	0.22	1.09	0.22	1.24	6.20	1.24	U
95-63-6	1,2,4-Trimethylbenzene	0.36	1.82	1.07	1.85	9.25	5.44	J
135-98-8	sec-butylbenzene	0.23	1.17	0.23	1.32	6.60	1.32	U
541-73-1	1,3-Dichlorobenzene	0.36	1.82	0.36	2.26	11.32	2.26	U
99-87-6	Isopropyltoluene	0.23	1.14	0.23	1.30	6.48	1.30	U
100-44-7	Benzyl chloride	0.42	4.20	0.42	2.25	22.48	2.25	U
106-46-7	1,4-Dichlorobenzene	0.73	7.29	0.73	4.53	45.27	4.53	U
104-51-8	n-Butylbenzene	0.43	4.29	0.43	2.43	24.31	2.43	U
95-50-1	1,2-Dichlorobenzene	0.72	7.15	0.72	4.44	44.39	4.44	U
96-12-8	1,2-Dibromo-3-chloropropane	1.20	4.79	1.20	11.95	47.80	11.95	U
120-82-1	1,2,4-Trichlorobenzene	0.74	7.36	0.74	5.64	56.42	5.64	U
87-68-3	Hexachlorobutadiene	0.74	7.36	0.74	8.11	81.11	8.11	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		9.693		97		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 28

File: 1007028A.D

Date Sampled: 02/19/10 Time: 16:30

Description: STA-4S-10

Date Received: 02/23/10

Can/Tube#: 315

Date Extracted:

Sam\_Type: SA

Date Analyzed:

QC\_Batch: 031210-MS1

Can Dilution Factor:

Air Volume: 200 ml

1.64 2

Not Detected Flag:

U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.43	2.16	0.43	2.20	11.01	2.20	U
74-87-3	Chloromethane	0.42	2.09	0.42	0.89	4.46	0.89	U
75-01-4	Vinyl chloride	0.43	2.13	0.43	1.13	5.63	1.13	U
74-83-9	Bromomethane	0.43	2.13	0.43	1.71	8.54	1.71	U
75-00-3	Chloroethane	0.43	2.13	0.43	1.16	5.81	1.16	U
64-17-5	Ethanol	1.41	7.05	1.41	2.75	13.73	2.75	U
75-69-4	Trichlorofluoromethane	0.43	2.13	0.43	2.47	12.37	2.47	U
75-05-8	Acetonitrile	0.84	4.18	0.84	1.45	7.26	1.45	U
67-64-1	Acetone	0.46	9.28	277.86	1.14	22.77	681.75	
4227-95-6	Methyl iodide	0.12	0.62	0.12	0.74	3.71	0.74	U
75-35-4	1,1-Dichloroethene	0.41	2.07	0.41	1.69	8.49	1.69	U
76-13-1	Freon 113	0.42	2.09	0.42	3.31	16.54	3.31	U
75-09-2	Dichloromethane	0.43	2.13	0.43	1.53	7.64	1.53	U
75-15-0	Carbon disulfide	0.35	1.75	0.91	1.13	5.64	2.92	J
156-60-5	trans-1,2-Dichloroethene	0.27	5.44	0.27	1.11	22.28	1.11	U
1634-04-4	Methyl tert butyl ether	0.28	5.57	0.28	1.04	20.71	1.04	U
75-34-3	1,1-Dichloroethane	0.41	2.07	0.41	1.73	8.67	1.73	U
108-05-4	Vinyl acetate	0.33	6.63	0.33	1.21	24.12	1.21	U
78-93-3	2-Butanone	0.38	1.92	133.82	1.17	5.84	407.44	
74-97-5	Bromochloromethane	0.20	1.01	0.20	1.10	5.51	1.10	U
78-83-1	Isobutyl alcohol	0.31	6.23	0.31	0.98	19.50	0.98	U
156-59-2	cis-1,2-Dichloroethene	0.42	2.12	0.42	1.73	8.66	1.73	U
594-20-7	2,2-Dichloropropane	0.34	6.72	0.34	1.60	32.05	1.60	U
67-66-3	Chloroform	0.42	2.09	44.79	2.11	10.54	225.84	
71-55-6	1,1,1-Trichloroethane	0.42	2.09	0.42	2.36	11.78	2.36	U
107-06-2	1,2-Dichloroethane	0.42	2.12	0.42	1.77	8.84	1.77	U
563-58-6	1,1-Dichloropropene	0.25	1.25	0.25	1.16	5.84	1.16	U
71-43-2	Benzene	0.42	2.12	0.92	1.39	6.98	3.05	J
56-23-5	Carbon tetrachloride	0.42	2.09	0.85	2.72	13.58	5.50	J
142-82-5	n-Heptane	0.23	1.15	2.63	0.97	4.86	11.12	
78-87-5	1,2-Dichloropropane	0.42	2.12	0.42	2.02	10.10	2.02	U
123-91-1	1,4 Dioxane	0.77	3.85	0.77	2.87	14.34	2.87	U
74-95-3	Dibromomethane	0.14	0.71	0.14	1.04	5.18	1.04	U
79-01-6	Trichloroethene	0.42	2.12	0.42	2.34	11.74	2.34	U
75-27-4	Bromodichloromethane	0.15	0.76	0.15	1.05	5.28	1.05	U
108-10-1	Methyl Isobutyl Ketone	0.29	1.43	0.66	1.21	6.04	2.81	J
10061-01-5	cis-1,3-Dichloropropene	0.43	2.17	0.43	2.04	10.19	2.04	U
108-88-3	Toluene	0.42	2.12	0.94	1.64	8.23	3.65	J
10061-02-6	trans-1,3-Dichloropropene	0.43	2.13	0.43	2.00	9.99	2.00	U
79-00-5	1,1,2-Trichloroethane	0.42	2.09	0.42	2.36	11.78	2.36	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.27	1.34	13.63	1.13	5.66	57.68	
142-28-9	1,3-Dichloropropane	0.25	1.24	0.25	1.18	5.91	1.18	U
124-48-1	Dibromochloromethane	0.15	0.75	0.15	1.32	6.64	1.32	U
106-93-4	1,2-Dibromoethane	0.43	2.13	0.43	3.38	16.92	3.38	U
127-18-4	Tetrachloroethylene	0.42	2.09	0.42	2.93	14.64	2.93	U
108-90-7	Chlorobenzene	0.42	2.09	0.42	1.99	9.94	1.99	U
630-20-6	1,1,1,2-Tetrachloroethane	0.16	0.78	0.18	1.11	5.52	1.11	U
100-41-4	Ethylbenzene	0.43	2.13	0.43	1.91	9.56	1.91	U
108-38-3	m & p-Xylene	0.84	4.22	0.90	3.79	18.94	4.02	J
100-42-5	Styrene	0.42	2.12	0.42	1.86	9.31	1.86	U
75-25-2	Bromoform	0.10	0.51	0.10	1.08	5.43	1.08	U
95-47-6	o-Xylene	0.42	2.09	0.42	1.88	9.38	1.88	U
79-34-5	1,1,2,2-Tetrachloroethane	0.42	2.09	0.42	2.96	14.82	2.96	U
96-18-4	1,2,3-Trichloropropane	0.19	0.93	0.19	1.16	5.77	1.16	U
103-65-1	n-Propylbenzene	0.28	1.42	0.28	1.44	7.20	1.44	U
98-82-8	Isopropylbenzene	0.29	1.44	0.29	1.46	7.28	1.46	U
108-87-8	1,3,5-Trimethylbenzene	0.43	2.17	0.43	2.21	11.03	2.21	U
98-06-6	tert-butyl benzene	0.25	1.25	0.25	1.42	7.11	1.42	U
95-63-6	1,2,4-Trimethylbenzene	0.42	2.09	0.42	2.12	10.61	2.12	U
135-98-8	sec-butylbenzene	0.27	1.34	0.27	1.51	7.57	1.51	U
541-73-1	1,3-Dichlorobenzene	0.42	2.09	0.42	2.60	12.98	2.60	U
99-87-6	Isopropyltoluene	0.26	1.31	0.26	1.49	7.44	1.49	U
100-44-7	Benzyl chloride	0.48	4.82	0.48	2.58	25.78	2.58	U
108-46-7	1,4-Dichlorobenzene	0.84	8.36	0.84	5.19	51.92	5.19	U
104-51-8	n-Butylbenzene	0.49	4.92	0.49	2.79	27.88	2.79	U
95-50-1	1,2-Dichlorobenzene	0.82	8.20	0.82	5.09	50.90	5.09	U
96-12-8	1,2-Dibromo-3-chloropropane	1.37	5.49	1.37	13.71	54.82	13.71	U
120-82-1	1,2,4-Trichlorobenzene	0.84	8.45	0.84	6.47	64.70	6.47	U
87-68-3	Hexachlorobutadiene	0.84	8.45	0.84	9.30	93.02	9.30	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		10.117		101		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**ENVIRONMENTAL**  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 29

File: 1007029A.D	Date Sampled: 02/19/10	Time: 17:08
Description: STA-4W-10	Date Received: 02/23/10	
Can/Tube#: 392	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 15:02
QC_Batch: 031410-MS1	Can Dilution Factor: 1.60	2
Air Volume: 200 ml	Not Detected Flag: U	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.42	2.10	0.42	2.14	10.74	2.14	U
74-87-3	Chloromethane	0.41	2.04	1.62	0.87	4.35	3.45	J
75-01-4	Vinyl chloride	0.42	2.08	0.42	1.10	5.49	1.10	U
74-83-9	Bromomethane	0.42	2.08	0.42	1.67	8.34	1.67	U
75-00-3	Chloroethane	0.42	2.08	0.66	1.13	5.67	1.80	J
64-17-5	Ethanol	1.38	6.88	1.38	2.68	13.39	2.68	U
75-69-4	Trichlorofluoromethane	0.42	2.08	0.42	2.41	12.07	2.41	U
75-05-8	Acetonitrile	0.82	4.08	0.82	1.42	7.08	1.42	U
67-64-1	Acetone	0.45	9.06	46.43	1.11	22.22	113.92	
4227-95-6	Methyl iodide	0.12	0.60	0.12	0.72	3.62	0.72	U
75-35-4	1,1-Dichloroethene	0.40	2.02	0.40	1.65	8.28	1.65	U
76-13-1	Freon 113	0.41	2.04	0.41	3.23	16.14	3.23	U
75-09-2	Dichlormethane	0.42	2.08	0.42	1.49	7.46	1.49	U
75-15-0	Carbon disulfide	0.34	1.71	1.41	1.10	5.50	4.55	J
156-60-5	trans-1,2-Dichloroethene	0.27	5.31	0.27	1.09	21.74	1.09	U
1634-04-4	Methyl tert butyl ether	0.27	5.43	0.27	1.01	20.21	1.01	U
75-34-3	1,1-Dichloroethane	0.40	2.02	0.40	1.69	8.46	1.69	U
108-05-4	Vinyl acetate	0.32	6.47	0.32	1.18	23.53	1.18	U
78-93-3	2-Butanone	0.37	1.87	14.30	1.14	5.70	43.54	
74-97-5	Bromochloromethane	0.20	0.98	0.20	1.07	5.38	1.07	U
78-83-1	Isobutyl alcohol	0.30	6.08	0.30	0.95	19.03	0.95	U
156-59-2	cis-1,2-Dichloroethene	0.41	2.06	0.41	1.69	8.45	1.69	U
594-20-7	2,2-Dichloropropane	0.33	6.55	0.33	1.56	31.27	1.56	U
67-66-3	Chloroform	0.41	2.04	22.17	2.06	10.29	111.77	
71-55-6	1,1,1-Trichloroethane	0.41	2.04	0.41	2.30	11.49	2.30	U
107-06-2	1,2-Dichloroethane	0.41	2.06	0.41	1.72	8.63	1.72	U
563-58-6	1,1-Dichloropropene	0.24	1.22	0.24	1.14	5.70	1.14	U
71-43-2	Benzene	0.41	2.06	1.78	1.36	6.81	5.86	J
56-23-5	Carbon tetrachloride	0.41	2.04	0.50	2.65	13.25	3.23	J
142-82-5	n-Heptane	0.22	1.12	1.86	0.94	4.74	7.86	
78-87-5	1,2-Dichloropropane	0.41	2.06	0.41	1.97	9.85	1.97	U
123-91-1	1,4 Dioxane	0.75	3.76	0.75	2.80	13.99	2.80	U
74-95-3	Dibromomethane	0.14	0.69	0.14	1.02	5.05	1.02	U
79-01-6	Trichloroethene	0.41	2.06	0.41	2.29	11.45	2.29	U
75-27-4	Bromodichloromethane	0.15	0.74	0.15	1.02	5.15	1.02	U
108-10-1	Methyl Isobutyl Ketone	0.28	1.39	0.45	1.18	5.89	1.89	J
10061-01-5	cis-1,3-Dichloropropene	0.42	2.12	0.42	1.99	9.94	1.99	U
108-88-3	Toluene	0.41	2.06	3.40	1.60	8.03	13.23	
10061-02-6	trans-1,3-Dichloropropene	0.42	2.08	0.42	1.95	9.75	1.95	U
79-00-5	1,1,2-Trichloroethane	0.41	2.04	0.41	2.30	11.49	2.30	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.26	1.30	0.26	1.11	5.52	1.11	U
142-28-9	1,3-Dichloropropane	0.24	1.21	0.24	1.15	5.76	1.15	U
124-48-1	Dibromochloromethane	0.15	0.74	0.15	1.29	6.47	1.29	U
106-93-4	1,2-Dibromoethane	0.42	2.08	0.42	3.30	16.50	3.30	U
127-18-4	Tetrachloroethylene	0.41	2.04	0.41	2.86	14.28	2.86	U
108-90-7	Chlorobenzene	0.41	2.04	0.41	1.94	9.70	1.94	U
630-20-6	1,1,1,2-Tetrachloroethane	0.15	0.76	0.15	1.08	5.39	1.08	U
100-41-4	Ethylbenzene	0.42	2.08	0.42	1.87	9.33	1.87	U
108-38-3	m & p-Xylene	0.82	4.12	1.40	3.70	18.48	6.28	J
100-42-5	Styrene	0.41	2.06	0.41	1.81	9.08	1.81	U
75-25-2	Bromoform	0.10	0.50	0.10	1.05	5.29	1.05	U
95-47-6	o-Xylene	0.41	2.04	0.63	1.83	9.15	2.83	J
79-34-5	1,1,2,2-Tetrachloroethane	0.41	2.04	0.41	2.89	14.46	2.89	U
96-18-4	1,2,3-Trichloropropane	0.18	0.90	0.18	1.13	5.63	1.13	U
103-65-1	n-Propylbenzene	0.28	1.38	0.28	1.40	7.03	1.40	U
98-82-8	Isopropylbenzene	0.28	1.40	0.39	1.42	7.11	1.98	J
108-67-8	1,3,5-Trimethylbenzene	0.42	2.12	0.42	2.15	10.76	2.15	U
98-06-6	tert-butyl benzene	0.24	1.22	0.24	1.38	6.94	1.38	U
95-63-6	1,2,4-Trimethylbenzene	0.41	2.04	0.41	2.07	10.36	2.07	U
135-98-8	sec-butylbenzene	0.26	1.30	0.26	1.47	7.39	1.47	U
541-73-1	1,3-Dichlorobenzene	0.41	2.04	0.41	2.53	12.66	2.53	U
99-87-6	Isopropyltoluene	0.26	1.28	0.26	1.45	7.25	1.45	U
100-44-7	Benzyl chloride	0.47	4.70	0.47	2.51	25.15	2.51	U
106-46-7	1,4-Dichlorobenzene	0.82	8.16	0.82	5.07	50.66	5.07	U
104-51-8	n-Butylbenzene	0.48	4.80	0.48	2.72	27.20	2.72	U
95-50-1	1,2-Dichlorobenzene	0.80	8.00	0.80	4.97	49.66	4.97	U
96-12-8	1,2-Dibromo-3-chloropropane	1.34	5.36	1.34	13.37	53.49	13.37	U
120-82-1	1,2,4-Trichlorobenzene	0.82	8.24	0.82	6.31	63.12	6.31	U
87-68-3	Hexachlorobutadiene	0.82	8.24	0.82	9.08	90.75	9.08	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits		Flag * = Out
Toluene-d8		10.000		9.741		97		70-130

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 30

File: 1007030A.D	Date Sampled: 02/17/10	Time: 16:18
Description: STA-3C-5	Date Received: 02/23/10	
Can/Tube#: 823	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/14/10	Time: 15:45
QC_Batch: 031410-MS1	Can Dilution Factor: 1.97	
Air Volume: 200 ml	Not Detected Flag: U	2

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.52	2.59	0.58	2.64	13.23	2.95	J
74-87-3	Chloromethane	0.50	2.51	1.74	1.07	5.36	3.71	J
75-01-4	Vinyl chloride	0.51	2.56	0.51	1.35	6.76	1.35	U
74-83-9	Bromomethane	0.51	2.56	0.51	2.05	10.26	2.05	U
75-00-3	Chloroethane	0.51	2.56	0.82	1.40	6.98	2.23	J
64-17-5	Ethanol	1.69	8.47	1.69	3.30	16.49	3.30	U
75-69-4	Trichlorofluoromethane	0.51	2.56	0.51	2.97	14.86	2.97	U
75-05-8	Acetonitrile	1.00	5.02	1.00	1.74	8.72	1.74	U
67-64-1	Acetone	0.56	11.15	59.44	1.37	27.36	145.84	
4227-95-6	Methyl iodide	0.15	0.74	0.15	0.89	4.46	0.89	U
75-35-4	1,1-Dichloroethene	0.50	2.49	0.50	2.04	10.20	2.04	U
76-13-1	Freon 113	0.50	2.51	0.50	3.97	19.87	3.97	U
75-09-2	Dichlormethane	0.61	2.56	0.67	1.84	9.18	2.40	J
75-15-0	Carbon disulfide	0.42	2.11	0.43	1.35	6.77	1.38	J
156-60-5	trans-1,2-Dichloroethene	0.33	6.54	0.33	1.34	26.76	1.34	U
1634-04-4	Methyl tert butyl ether	0.33	6.69	0.33	1.24	24.88	1.24	U
75-34-3	1,1-Dichloroethane	0.50	2.49	0.50	2.08	10.42	2.08	U
108-05-4	Vinyl acetate	0.40	7.97	0.40	1.45	28.97	1.45	U
78-93-3	2-Butanone	0.46	2.30	12.46	1.41	7.02	37.93	
74-97-5	Bromochloromethane	0.24	1.21	0.24	1.32	6.62	1.32	U
78-83-1	Isobutyl alcohol	0.37	7.49	0.37	1.17	23.43	1.17	U
156-59-2	cis-1,2-Dichloroethene	0.51	2.54	0.51	2.08	10.40	2.08	U
594-20-7	2,2-Dichloropropane	0.40	8.07	0.40	1.92	38.50	1.92	U
67-66-3	Chloroform	0.50	2.51	174.68	2.53	12.68	880.77	
71-55-6	1,1,1-Trichloroethane	0.50	2.51	0.50	2.83	14.15	2.83	U
107-06-2	1,2-Dichloroethane	0.51	2.54	0.51	2.12	10.62	2.12	U
563-58-6	1,1-Dichloropropene	0.30	1.50	0.30	1.40	7.02	1.40	U
71-43-2	Benzene	0.51	2.54	4.05	1.67	8.38	13.35	
56-23-5	Carbon tetrachloride	0.50	2.51	2.43	3.26	16.31	15.75	J
142-82-5	n-Heptane	0.27	1.38	2.07	1.16	5.84	8.78	
78-87-5	1,2-Dichloropropane	0.51	2.54	0.51	2.42	12.13	2.42	U
123-91-1	1,4 Dioxane	0.93	4.63	0.93	3.44	17.22	3.44	U
74-95-3	Dibromomethane	0.17	0.85	0.17	1.25	6.22	1.25	U
79-01-6	Trichloroethene	0.51	2.54	0.51	2.81	14.10	2.81	U
75-27-4	Bromodichloromethane	0.18	0.92	0.18	1.26	6.34	1.26	U
108-10-1	Methyl Isobutyl Ketone	0.34	1.71	0.34	1.45	7.25	1.45	U
10061-01-5	cis-1,3-Dichloropropene	0.52	2.61	0.52	2.45	12.24	2.45	U
108-88-3	Toluene	0.51	2.54	7.60	1.97	9.88	29.54	
10061-02-6	trans-1,3-Dichloropropene	0.51	2.56	0.51	2.40	12.00	2.40	U
79-00-5	1,1,2-Trichloroethane	0.50	2.51	0.50	2.83	14.15	2.83	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.32	1.61	0.32	1.36	6.79	1.36	U
142-28-9	1,3-Dichloropropane	0.30	1.49	0.30	1.42	7.10	1.42	U
124-48-1	Dibromochloromethane	0.18	0.91	0.18	1.59	7.97	1.59	U
106-93-4	1,2-Dibromoethane	0.51	2.56	0.51	4.06	20.32	4.06	U
127-18-4	Tetrachloroethylene	0.50	2.51	0.50	3.52	17.59	3.52	U
108-90-7	Chlorobenzene	0.50	2.51	0.50	2.39	11.94	2.39	U
630-20-6	1,1,1,2-Tetrachloroethane	0.19	0.94	0.19	1.33	6.63	1.33	U
100-41-4	Ethylbenzene	0.51	2.56	0.97	2.30	11.49	4.34	J
108-38-3	m & p-Xylene	1.01	5.07	5.25	4.55	22.75	23.55	
100-42-5	Styrene	0.51	2.54	0.51	2.23	11.18	2.23	U
75-25-2	Bromoform	0.12	0.61	0.12	1.30	6.52	1.30	U
95-47-6	o-Xylene	0.50	2.51	2.34	2.25	11.28	10.51	J
79-34-5	1,1,2,2-Tetrachloroethane	0.50	2.51	0.50	3.56	17.80	3.56	U
96-18-4	1,2,3-Trichloropropane	0.22	1.11	0.22	1.39	6.93	1.39	U
103-65-1	n-Propylbenzene	0.34	1.70	0.47	1.72	8.65	2.37	J
98-82-8	Isopropylbenzene	0.34	1.72	2.07	1.75	8.75	10.50	
108-67-8	1,3,5-Trimethylbenzene	0.52	2.61	1.00	2.65	13.25	5.06	J
98-06-6	tert-butyl benzene	0.30	1.51	0.30	1.70	8.54	1.70	U
95-63-6	1,2,4-Trimethylbenzene	0.50	2.51	4.54	2.55	12.75	23.05	
135-98-8	sec-butylbenzene	0.32	1.61	0.32	1.81	9.10	1.81	U
541-73-1	1,3-Dichlorobenzene	0.50	2.51	0.50	3.12	15.59	3.12	U
99-87-6	Isopropyltoluene	0.32	1.58	0.32	1.79	8.93	1.79	U
100-44-7	Benzyl chloride	0.58	5.79	0.58	3.10	30.96	3.10	U
106-46-7	1,4-Dichlorobenzene	1.00	10.05	1.00	6.24	62.37	6.24	U
104-51-8	n-Butylbenzene	0.59	5.91	0.59	3.35	33.49	3.35	U
95-50-1	1,2-Dichlorobenzene	0.99	9.85	0.99	6.11	61.15	6.11	U
96-12-8	1,2-Dibromo-3-chloropropane	1.65	6.60	1.65	16.46	65.86	16.46	U
120-82-1	1,2,4-Trichlorobenzene	1.01	10.15	1.01	7.77	77.72	7.77	U
87-68-3	Hexachlorobutadiene	1.01	10.15	1.01	11.17	111.74	11.17	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		10.093		101	* = Out	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210070

Laboratory Number: 31

File: 1007031A.D

Date Sampled: 02/17/10 Time: 17:30

Description: STA-3C-10

Date Received: 02/23/10

Can/Tube#: 304

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/14/10

QC\_Batch: 031410-MS1

Time: 16:36

Air Volume: 200 ml

Can Dilution Factor: 1.61

Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.42	2.12	0.42	2.16	10.81	2.16	U
74-87-3	Chloromethane	0.41	2.05	1.24	0.88	4.38	2.64	J
75-01-4	Vinyl chloride	0.42	2.09	0.42	1.10	5.52	1.10	U
74-83-9	Bromomethane	0.42	2.09	0.42	1.68	8.39	1.68	U
75-00-3	Chloroethane	0.42	2.09	0.42	1.14	5.70	1.14	U
64-17-5	Ethanol	1.38	6.92	1.38	2.70	13.48	2.70	U
75-69-4	Trichlorofluoromethane	0.42	2.09	0.42	2.43	12.14	2.43	U
75-05-8	Acetonitrile	0.82	4.11	0.82	1.43	7.13	1.43	U
67-64-1	Acetone	0.46	9.11	47.60	1.12	22.36	116.80	
4227-95-6	Methyl iodide	0.12	0.60	0.12	0.73	3.64	0.73	U
75-35-4	1,1-Dichloroethene	0.41	2.04	0.41	1.66	8.33	1.66	U
76-13-1	Freon 113	0.41	2.05	0.41	3.25	16.24	3.25	U
75-09-2	Dichloromethane	0.42	2.09	0.44	1.50	7.50	1.58	J
75-15-0	Carbon disulfide	0.34	1.72	2.06	1.11	5.54	6.62	
156-60-5	trans-1,2-Dichloroethene	0.27	5.35	0.27	1.09	21.87	1.09	U
1634-04-4	Methyl tert butyl ether	0.27	5.47	0.27	1.02	20.34	1.02	U
75-34-3	1,1-Dichloroethane	0.41	2.04	0.41	1.70	8.51	1.70	U
108-05-4	Vinyl acetate	0.33	6.51	0.33	1.18	23.68	1.18	U
78-93-3	2-Butanone	0.38	1.88	13.79	1.15	5.74	41.98	
74-97-5	Bromochloromethane	0.20	0.99	0.20	1.08	5.41	1.08	U
78-83-1	Isobutyl alcohol	0.31	6.12	0.31	0.96	19.14	0.96	U
156-59-2	cis-1,2-Dichloroethene	0.41	2.08	0.41	1.70	8.50	1.70	U
594-20-7	2,2-Dichloropropane	0.33	6.59	0.33	1.57	31.46	1.57	U
67-66-3	Chloroform	0.41	2.05	185.98	2.07	10.35	937.74	
71-55-6	1,1,1-Trichloroethane	0.41	2.05	0.41	2.31	11.56	2.31	U
107-06-2	1,2-Dichloroethane	0.41	2.08	0.41	1.73	8.68	1.73	U
563-58-6	1,1-Dichloropropene	0.24	1.22	0.24	1.14	5.74	1.14	U
71-43-2	Benzene	0.41	2.08	1.48	1.37	6.85	4.90	J
56-23-5	Carbon tetrachloride	0.41	2.05	3.28	2.67	13.33	21.28	
142-82-5	n-Heptane	0.22	1.13	2.16	0.95	4.77	9.15	
78-87-5	1,2-Dichloropropane	0.41	2.08	0.41	1.98	9.91	1.98	U
123-91-1	1,4 Dioxane	0.76	3.78	0.76	2.82	14.08	2.82	U
74-95-3	Dibromomethane	0.14	0.69	0.14	1.02	5.08	1.02	U
79-01-6	Trichloroethene	0.41	2.08	0.41	2.30	11.52	2.30	U
75-27-4	Bromodichloromethane	0.15	0.75	0.15	1.03	5.18	1.03	U
108-10-1	Methyl Isobutyl Ketone	0.28	1.40	0.28	1.19	5.93	1.19	U
10061-01-5	cis-1,3-Dichloropropene	0.43	2.13	0.43	2.00	10.00	2.00	U
108-88-3	Toluene	0.41	2.08	3.68	1.61	8.08	14.32	
10061-02-6	trans-1,3-Dichloropropene	0.42	2.09	0.42	1.96	9.81	1.96	U
79-00-5	1,1,2-Trichloroethane	0.41	2.05	0.41	2.31	11.56	2.31	U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
591-78-6	2-Hexanone	0.26	1.31	0.26	1.11	5.55	1.11	U
142-28-9	1,3-Dichloropropane	0.24	1.22	0.24	1.16	5.80	1.16	U
124-48-1	Dibromochloromethane	0.15	0.74	0.15	1.30	6.51	1.30	U
106-93-4	1,2-Dibromoethane	0.42	2.09	0.42	3.32	16.61	3.32	U
127-18-4	Tetrachloroethene	0.41	2.05	0.65	2.87	14.37	4.52	J
108-90-7	Chlorobenzene	0.41	2.05	0.41	1.95	9.76	1.95	U
630-20-6	1,1,1,2-Tetrachloroethane	0.15	0.76	0.15	1.09	5.42	1.09	U
100-41-4	Ethylbenzene	0.42	2.09	0.42	1.88	9.39	1.88	U
108-38-3	m & p-Xylene	0.83	4.15	1.25	3.72	18.59	5.62	J
100-42-5	Styrene	0.41	2.08	0.41	1.82	9.14	1.82	U
75-25-2	Bromoform	0.10	0.50	0.10	1.06	5.33	1.06	U
95-47-6	o-Xylene	0.41	2.05	0.55	1.84	9.21	2.46	J
79-34-5	1,1,2,2-Tetrachloroethane	0.41	2.05	0.41	2.91	14.55	2.91	U
96-18-4	1,2,3-Trichloropropane	0.18	0.91	0.18	1.13	5.66	1.13	U
103-65-1	n-Propylbenzene	0.28	1.39	0.28	1.41	7.07	1.41	U
98-82-8	Isopropylbenzene	0.28	1.41	0.28	1.43	7.15	1.43	U
108-67-8	1,3,5-Trimethylbenzene	0.43	2.13	0.43	2.17	10.83	2.17	U
98-06-6	tert-butyl benzene	0.25	1.23	0.25	1.39	6.98	1.39	U
95-63-6	1,2,4-Trimethylbenzene	0.41	2.05	0.41	2.08	10.42	2.08	U
135-98-8	sec-butylbenzene	0.26	1.31	0.26	1.48	7.44	1.48	U
541-73-1	1,3-Dichlorobenzene	0.41	2.05	0.41	2.55	12.74	2.55	U
99-87-6	Isopropyltoluene	0.26	1.29	0.26	1.46	7.30	1.46	U
100-44-7	Benzyl chloride	0.47	4.73	0.47	2.53	25.31	2.53	U
106-46-7	1,4-Dichlorobenzene	0.82	8.21	0.82	5.10	50.97	5.10	U
104-51-8	n-Butylbenzene	0.48	4.83	0.48	2.74	27.37	2.74	U
95-50-1	1,2-Dichlorobenzene	0.81	8.05	0.81	5.00	49.97	5.00	U
96-12-8	1,2-Dibromo-3-chloropropane	1.35	5.39	1.35	13.48	53.82	13.46	U
120-82-1	1,2,4-Trichlorobenzene	0.83	8.29	0.83	6.35	63.52	6.35	U
87-68-3	Hexachlorobutadiene	0.83	8.29	0.83	9.13	91.32	9.13	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		% Rec.		* = Out		
9.786      98      70-130								

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

3) MDL and RL are adjusted for sample volume and can dilution.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 01

File: 1007001MA.D

Date Sampled: 02/17/10 Time: 11:15

Description: STA-3S-5

Date Received: 02/18/10

Can/Tube#: 365

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 18:48

Air Volume: 0.5 ml

Can Dilution Factor: 1.62 0

Not Detected Flag: ND

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	12,050	1.205	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 02

File: 1007002MA D

Date Sampled: 02/17/10 Time: 12:55

Description: STA-3S-10

Date Received: 02/18/10

Can/Tube#: 357

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 18:40

Air Volume: 0.5 ml

Can Dilution Factor: 1.75 0

Not Detected Flag:

ND 3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	747	0.075	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 03

File: 1007003MA.D

Date Sampled: 02/17/10 Time: 14:29

Description: STA-3W-5

Date Received: 02/18/10

Can/Tube#: 338

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 18:21

Air Volume: 0.5 ml

Can Dilution Factor: 2.05 0

Not Detected Flag: ND 3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	68,929	6.893	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 04

File: 1007004MA.D

Date Sampled: 02/17/10 Time: 14:40

Description: STA-3W-10

Date Received: 02/18/10

Can/Tube#: 358

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10 Time: 18:16

QC\_Batch: 031010-GC5

Can Dilution Factor: 2.00 0

Air Volume: 0.5 ml

Not Detected Flag: ND 3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	101,835	10.184	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

SDG: 210070

Analytical Method:

ASTM D 1946

Laboratory Number:

05

File: 1007005MA.D

Date Sampled: 02/18/10 Time: 8:14

Description: STA-3C-5-REP

Date Received: 02/18/10

Can/Tube#: 398

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.28

Air Volume: 0.5 ml

Not Detected Flag: ND

0

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	59.794	5.979	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 06

File: 1007006MA.D

Date Sampled: 02/18/10 Time: 8:14

Description: STA-3C-5-DUP

Date Received: 02/18/10

Can/Tube#: 369

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.29

Air Volume: 0.5 ml

Not Detected Flag: ND

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	81,233	8.123	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 07

File: 1007007MA.D

Date Sampled: 02/18/10 Time: 8:50

Description: STA-3C-10-REP

Date Received: 02/18/10

Can/Tube#: 371

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.41

Air Volume: 0.5 ml

Not Detected Flag: ND

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	314,350	31.435	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

**ASTM D 1946 GC/TCD**

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 08

File: 1007008MA.D

Date Sampled: 02/18/10 Time: 8:50

Description: STA-3C-10-DUP

Date Received: 02/18/10

Can/Tube#: 351

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.36

Air Volume: 0.5 ml

Not Detected Flag: ND

0

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	268,698	26.870	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 09

File: 1007009MA.D

Date Sampled: 02/18/10 Time: 11:00

Description: STA-3N-5

Date Received: 02/18/10

Can/Tube#: 346

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 17:35

Air Volume: 0.5 ml

Can Dilution Factor: 1.42 0

Not Detected Flag: ND 3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	399	0.040	J

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 10

File: 1007010MA.D

Date Sampled: 02/18/10 Time: 11:59

Description: STA-3N-10

Date Received: 02/18/10

Can/Tube#: 352

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 17:25

Air Volume: 0.5 ml

Can Dilution Factor: 1.63

Not Detected Flag: ND

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	14,559	1.456	

Notes 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 11

File: 1007011MA D

Date Sampled: 02/18/10 Time: 12:58

Description: STA-3E-5

Date Received: 02/18/10

Can/Tube#: 324

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 17:16

Air Volume: 0.5 ml

Can Dilution Factor: 1.64

Not Detected Flag: ND

Flag: 3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	31,524	3.152	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 12

File: 1007012MA.D

Date Sampled: 02/18/10 Time: 13:20

Description: STA-3E-10

Date Received: 02/18/10

Can/Tube#: 301

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.68

Air Volume:

0.5 ml

Time: 16:57

Not Detected Flag: ND

0

Not Detected Flag: ND

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	800	0.060	86,823	8.682	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

**E**NVIRO NMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 13

File: 1007013MA.D

Date Sampled: 02/18/10 Time: 14:11

Description: STA-3C-BLANK

Date Received: 02/18/10

Can/Tube#: 128

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 3.09

Air Volume: 0.5 ml

Not Detected Flag: ND

0

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	200	0.020	U

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 14

File: 1007014MA.D

Date Sampled: 02/18/10 Time: 14:18

Description: STA-4C-BLANK

Date Received: 02/18/10

Can/Tube#: 122

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 16:44

Air Volume: 0.5 ml

Can Dilution Factor: 4.60

Not Detected Flag: ND

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	200	0.020	U

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 15

File: 1007015MA.D

Date Sampled: 02/19/10 Time: 8:05

Description: STA-4E-5

Date Received: 02/18/10

Can/Tube#: 316

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.52

Air Volume: 0.5 ml

Time: 13:37

Not Detected Flag: ND

0

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	216	0.022	J

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 16

File: 1007016MA.D

Date Sampled: 02/19/10 Time: 8:37

Description: STA-4E-10

Date Received: 02/18/10

Can/Tube#: 384

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.62

Air Volume: 0.5 ml

Time: 13:26

Not Detected Flag: ND

0

Not Detected Flag: ND

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	200	0.020	U

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 17

File: 1007017MA.D

Date Sampled: 02/19/10 Time: 9:31

Description: STA-4N-5

Date Received: 02/18/10

Can/Tube#: 383

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.55

Air Volume: 0.5 ml

Not Detected Flag: ND

0

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	5,275	0.528	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 18

File: 1007018MA D

Date Sampled: 02/19/10 Time: 10:01

Description: STA-4N-10

Date Received: 02/18/10

Can/Tube#: 379

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.56

Air Volume: 0.5 ml

Not Detected Flag: ND

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	266	0.027	J

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

SDG: 210070

Analytical Method:

ASTM D 1946

Laboratory Number:

19

File: 1007019MA.D

Date Sampled: 02/19/10 Time: 11:53

Description: STA-4C-5

Date Received: 02/18/10

Can/Tube#: 4

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 12:27

Air Volume: 0.5 ml

Can Dilution Factor: 1.50 0

Not Detected Flag: ND 3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	200	0.020	U

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number:

20

File: 1007020MA.D

Date Sampled: 02/19/10 Time: 12:18

Description: STA-4C-10

Date Received: 02/18/10

Can/Tube#: 335

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.68

Air Volume: 0.5 ml

Time: 12:18

Not Detected Flag: ND

0

Not Detected Flag: ND

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	Sample Concentration %	Flag
7440-59-7	Helium	200	0.020	600	0.060	455	0.046	J

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD    SDG: 210070  
Analytical Method:    Laboratory Number: 21  
  
File: 1007021MA.D    Date Sampled: 02/19/10      Time: 13:27  
Description: STA-4C-5-REP    Date Received: 02/18/10  
Can/Tube#: 399    Date Extracted:  
Sam\_Type: SA    Date Analyzed: 03/10/10      Time: 12:13  
QC\_Batch: 031010-GC5    Can Dilution Factor: 1.77      0  
Air Volume: 0.5 ml    Not Detected Flag: ND      3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	232	0.023	J

- Notes:
- 1) U and ND are Flags used for Not Detected
  - 2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)
  - 3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)
  - 4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 22

File: 1007022MA.D

Date Sampled: 02/19/10 Time: 13:27

Description: STA-4C-5-DUP

Date Received: 02/18/10

Can/Tube#: 308

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.72

Air Volume: 0.5 ml

Not Detected Flag: ND

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	282	0.028	J

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 23

File: 1007023MA.D

Date Sampled: 02/19/10 Time: 13:45

Description: STA-4C-10-REP

Date Received: 02/18/10

Can/Tube#: 344

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 2.33

Air Volume: 0.5 ml

Time: 11:58

Not Detected Flag: ND

Flag: 3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	5,604	0.560	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 24

File: 1007024MA.D

Date Sampled: 02/19/10 Time: 13:45

Description: STA-4C-10-DUP

Date Received: 02/18/10

Can/Tube#: 323A

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 11.50

Air Volume: 0.5 ml

Can Dilution Factor: 2.38

Not Detected Flag: ND

0

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	5,948	0.595	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen. Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 25

File: 1007025MA.D

Date Sampled: 02/19/10 Time: 14:15

Description: STA-4C-5B

Date Received: 02/18/10

Can/Tube#: 311

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.00

Air Volume: 0.5 ml

Not Detected Flag: ND

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	200	0.020	U

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 26

File: 1007026MA.D

Date Sampled: 02/10/10 Time: 15:18

Description: STA-4WY-5

Date Received: 02/18/10

Can/Tube#: 320

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 11:32

Air Volume: 0.5 ml

Can Dilution Factor: 1.78

Not Detected Flag: ND

Flag: 3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	1,256	0.126	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 27

File: 1007027MA D

Date Sampled: 02/19/10 Time: 16:18

Description: STA-4S-5

Date Received: 02/18/10

Can/Tube#: 341

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 11:24

Air Volume: 0.5 ml

Can Dilution Factor: 1.43

Not Detected Flag: ND

3

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	1,780	0.178	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 28

File: 1007028MA.D

Date Sampled: 02/19/10 Time: 16:30

Description: STA-4S-10

Date Received: 02/18/10

Can/Tube#: 315

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.64

Air Volume:

0.5 ml

Not Detected Flag: ND

CAS#	Compound	MDL ppmv	MDL %	RL ppmv	RL %	Sample Concentration ppmv	%	Flag
7440-59-7	Helium	200	0.020	600	0.060	200	0.020	U

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 29

File: 1007029MA D

Date Sampled: 02/19/10 Time: 17:08

Description: STA-4W-10

Date Received: 02/18/10

Can/Tube#: 392

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 11:01

Air Volume: 0.5 ml

Can Dilution Factor: 1.60

Not Detected Flag: ND

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	319.659	31.966	

Notes 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number:

30

File: 1007030MA.D

Date Sampled: 02/17/10 Time: 16:18

Description: STA-3C-5

Date Received: 02/18/10

Can/Tube#: 823

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Can Dilution Factor: 1.97

Air Volume: 0.5 ml

Not Detected Flag: ND

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	267,376	26.738	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit. LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

ASTM D 1946 GC/TCD

Analytical Method:

ASTM D 1946

SDG: 210070

Laboratory Number: 31

File: 1007031MA.D

Date Sampled: 02/17/10 Time: 17:30

Description: STA-3C-10

Date Received: 02/18/10

Can/Tube#: 304

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/10/10

QC\_Batch: 031010-GC5

Time: 10:32

Air Volume:

0.5 ml

Can Dilution Factor: 1.61

0

Not Detected Flag: ND

3

CAS#	Compound	MDL	MDL	RL	RL	Sample Concentration		Flag
		ppmv	%	ppmv	%	ppmv	%	
7440-59-7	Helium	200	0.020	600	0.060	417,568	41.757	

Notes: 1) U and ND are Flags used for Not Detected

2) %\* Indicates sample concentration is normalized to 100% (only available for complete analysis)

3) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

4) Argon co-elutes with Oxygen; Atmospheric Argon is 0.946%

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 01

File: 1007101A.D	Date Sampled: 02/17/10	Time: 8:20
Description: SF-3W	Date Received: 02/18/10	
Can/Tube#: 407	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/02/10	Time: 15:39
QC_Batch: 030210-MS1	Can Dilution Factor: 1.26	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2^min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.69	0.34	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.14	0.69	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.17	0.86	0.17	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.26	1.31	0.26	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.89	0.18	0.007	U
64-17-5	Ethanol	0.22	0.89	0.42	2.11	1.73	0.067	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.38	1.90	0.38	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.12	0.22	0.008	U
67-64-1	Acetone	0.07	4.22	0.17	3.50	10.34	0.398	
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.57	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.30	0.26	0.010	U
76-13-1	Freon 113	0.06	0.06	0.51	2.54	0.51	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.23	1.17	0.23	0.009	U
75-15-0	Carbon disulfide	0.05	0.05	0.17	0.87	0.17	0.007	U
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.42	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.18	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.33	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.71	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.34	0.18	0.90	4.08	0.157	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.85	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.00	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.06	0.06	0.27	1.33	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	4.92	0.25	0.010	U
67-66-3	Chloroform	0.06	0.06	0.32	1.62	0.32	0.012	U
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.81	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.06	0.06	0.27	1.36	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.90	0.18	0.007	U
71-43-2	Benzene	0.06	0.13	0.21	1.07	0.42	0.016	J
56-23-5	Carbon tetrachloride	0.06	0.06	0.42	2.09	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.75	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.06	0.06	0.31	1.55	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.44	2.20	0.44	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.80	0.16	0.006	U
79-01-6	Trichloroethene	0.06	0.06	0.36	1.80	0.36	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.81	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.93	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.31	1.57	0.31	0.012	U
108-88-3	Toluene	0.06	0.06	0.25	1.26	0.25	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.54	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.81	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.17	0.87	0.17	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.91	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.02	0.20	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.52	2.60	0.52	0.020	U
127-18-4	Tetrachloroethene	0.06	0.06	0.45	2.25	0.45	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.31	1.53	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.85	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.29	1.47	0.29	0.011	U
108-38-3	m & p-Xylene	0.13	0.13	0.58	2.91	0.58	0.022	U
100-42-5	Styrene	0.06	0.06	0.29	1.43	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.83	0.17	0.007	U
95-47-6	o-Xylene	0.06	0.06	0.29	1.44	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.46	2.28	0.46	0.018	U
98-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.89	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.11	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.69	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.09	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.06	0.06	0.33	1.63	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.16	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.40	1.99	0.40	0.015	U
99-87-6	Isoprooyltoluene	0.04	0.04	0.23	1.14	0.23	0.009	U
100-44-7	Benzyl chloride	0.07	0.07	0.40	3.96	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.80	7.98	0.80	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.43	4.28	0.43	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.78	7.82	0.78	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.11	8.42	2.11	0.081	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	0.99	9.94	0.99	0.038	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.43	14.29	1.43	0.055	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	12.225	122	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

## ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 02

File: 1007102A.D	Date Sampled: 02/17/10	Time: 8:21
Description: SF-3S	Date Received: 02/18/10	
Can/Tube#: 184	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/02/10	Time: 19:23
QC_Batch: 030210-MS1	Can Dilution Factor: 1.24	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.33	1.67	0.33	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.13	0.67	0.13	0.005	U
75-01-4	Vinyl chloride	0.06	0.06	0.17	0.85	0.17	0.007	U
74-83-9	Bromomethane	0.06	0.06	0.26	1.29	0.26	0.010	U
75-00-3	Chloroethane	0.06	0.06	0.18	0.88	0.18	0.007	U
64-17-5	Ethanol	0.21	0.21	0.42	2.08	0.42	0.016	U
75-69-4	Trichlorofluoromethane	0.06	0.06	0.37	1.87	0.37	0.014	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.10	0.22	0.008	U
67-64-1	Acetone	0.07	5.19	0.17	3.44	12.74	0.490	
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.56	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.28	0.26	0.010	U
76-13-1	Freon 113	0.06	0.06	0.50	2.50	0.50	0.019	U
75-09-2	Dichloromethane	0.06	0.06	0.23	1.18	0.23	0.009	U
75-15-0	Carbon disulfide	0.05	0.07	0.17	0.85	0.21	0.008	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.37	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.13	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.26	1.31	0.26	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.18	3.65	0.18	0.007	U
78-93-3	2-Butanone	0.06	3.73	0.18	0.88	11.38	0.437	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.83	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	2.95	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.06	0.06	0.26	1.31	0.26	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.24	4.85	0.24	0.009	U
67-66-3	Chloroform	0.08	0.15	0.32	1.59	0.78	0.030	J
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.78	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.06	0.06	0.27	1.34	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.88	0.18	0.007	U
71-43-2	Benzene	0.06	0.14	0.21	1.06	0.45	0.017	J
56-23-5	Carbon tetrachloride	0.06	0.06	0.41	2.05	0.41	0.016	U
142-82-5	n-Heptane	0.03	0.03	0.15	0.73	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.06	0.06	0.30	1.53	0.30	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.43	2.17	0.43	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.78	0.16	0.006	U
79-01-6	Trichloroethene	0.06	0.06	0.35	1.78	0.35	0.013	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.80	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.18	0.91	0.18	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.31	1.54	0.31	0.012	U
108-88-3	Toluene	0.06	0.06	0.25	1.24	0.25	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.06	0.06	0.30	1.51	0.30	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.78	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.17	0.86	0.17	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.89	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.00	0.20	0.008	U
106-93-4	1,2-Dibromoethane	0.06	0.06	0.51	2.56	0.51	0.020	U
127-18-4	Tetrachloroethene	0.06	0.06	0.44	2.21	0.44	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.30	1.50	0.30	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.83	0.17	0.007	U
100-41-4	Ethylbenzene	0.06	0.06	0.29	1.45	0.29	0.011	U
108-38-3	m & p-Xylene	0.13	0.13	0.57	2.86	0.57	0.022	U
100-42-5	Styrene	0.06	0.06	0.28	1.41	0.28	0.011	U
75-25-2	Bromoform	0.02	0.02	0.16	0.82	0.16	0.006	U
95-47-6	o-Xylene	0.06	0.06	0.28	1.42	0.28	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.45	2.24	0.45	0.017	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.17	0.87	0.17	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.09	0.22	0.008	U
98-82-3	Isopropylbenzene	0.04	0.04	0.22	1.10	0.22	0.008	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.33	1.67	0.33	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.21	1.08	0.21	0.008	U
95-63-8	1,2,4-Trimethylbenzene	0.06	0.06	0.32	1.61	0.32	0.012	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.15	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.39	1.96	0.39	0.015	U
99-87-6	Isopropyltoluene	0.04	0.04	0.22	1.12	0.22	0.008	U
100-44-7	Benzyl chloride	0.07	0.07	0.39	3.90	0.39	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.79	7.85	0.79	0.030	U
104-51-8	n-Butylbenzene	0.07	0.07	0.42	4.22	0.42	0.016	U
95-50-1	1,2-Dichlorobenzene	0.12	0.12	0.77	7.70	0.77	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.07	8.29	2.07	0.080	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	0.98	9.78	0.98	0.038	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.41	14.07	1.41	0.054	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	9.288	93	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 03

File: 1007103A.D

Date Sampled: 02/17/10 Time: 9:10

Description: SF-3C

Date Received: 02/18/10

Can/Tube#: 543

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/02/10

QC\_Batch: 030210-MS1

Can Dilution Factor: 1.27 Time: 20:05

Air Volume: 1000 ml

Flux Factor: 0.0385 2 0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.71	0.34	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.14	0.69	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.17	0.87	0.17	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.26	1.32	0.26	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.90	0.18	0.007	U
64-17-5	Ethanol	0.22	0.71	0.43	2.13	1.38	0.053	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.38	1.92	0.38	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.12	0.22	0.008	U
67-64-1	Acetone	0.07	2.52	0.18	3.53	6.19	0.238	U
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.57	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.31	0.26	0.010	U
76-13-1	Freon 113	0.06	0.08	0.51	2.56	0.51	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.18	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.09	0.17	0.87	0.29	0.011	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.45	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.21	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.34	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.74	0.19	0.007	U
78-93-3	2-Butanone	0.06	0.54	0.18	0.90	1.65	0.064	U
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.85	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.02	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.34	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	4.96	0.25	0.010	U
67-66-3	Chloroform	0.06	0.21	0.33	1.63	1.07	0.041	J
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.27	1.37	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.90	0.18	0.007	U
71-43-2	Benzene	0.07	0.09	0.22	1.08	0.29	0.011	J
56-23-5	Carbon tetrachloride	0.06	0.06	0.42	2.10	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.75	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.56	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.44	2.22	0.44	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.80	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.36	1.82	0.36	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.06	0.19	0.94	0.26	0.010	J
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.25	1.27	0.25	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.55	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.09	0.18	0.88	0.39	0.015	J
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.03	0.20	0.008	U
108-93-4	1,2-Dibromoethane	0.07	0.07	0.52	2.62	0.52	0.020	U
127-18-4	Tetrachloroethene	0.06	0.06	0.45	2.27	0.45	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.31	1.54	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.85	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.48	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.59	2.93	0.59	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.44	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.84	0.17	0.007	U
95-47-6	o-Xylene	0.06	0.06	0.29	1.45	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.46	2.29	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.89	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.23	1.13	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.71	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.10	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.06	0.06	0.33	1.64	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.17	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.40	2.01	0.40	0.015	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.15	0.23	0.009	U
100-44-7	Benzyl chloride	0.07	0.07	0.40	3.99	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.80	8.04	0.80	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.43	4.32	0.43	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.79	7.88	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.12	8.49	2.12	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.00	10.02	1.00	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.44	14.41	1.44	0.055	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10 000	12.728	127	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

**EPA Method TO-15 Modified Full Scan GC/MS**
**Analytical Method:** TO-15

**SDG:** 210071

**Laboratory Number:** 04

**File:** 1007104A.D

**Date Sampled:** 02/17/10

**Time:** 9:06

**Description:** SF-3CR

**Date Received:** 02/18/10

**Can/Tube#:** 2964

**Date Extracted:**
**Sam\_Type:** SA

**Date Analyzed:** 03/02/10

**Time:** 20:54

**QC\_Batch:** 030210-MS1

**Can Dilution Factor:** 1.27

**2**
**Air Volume:** 1000 ml

**Flux Factor:**
**0.0385**
**0.0036**

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.71	0.34	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.14	0.69	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.17	0.87	0.17	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.26	1.32	0.26	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.90	0.18	0.007	U
64-17-5	Ethanol	0.22	0.22	0.43	2.13	0.43	0.017	U
75-69-4	Trichlorofluoromethane	0.07	0.07	0.38	1.92	0.38	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.12	0.22	0.008	U
67-64-1	Acetone	0.07	5.80	0.18	3.53	14.24	0.548	
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.57	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.31	0.26	0.010	U
76-13-1	Freon 113	0.06	0.06	0.51	2.56	0.51	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.18	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.05	0.17	0.87	0.17	0.007	U
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.45	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.21	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.34	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.74	0.19	0.007	U
78-93-3	2-Butanone	0.06	2.48	0.18	0.90	7.56	0.291	
74-97-5	Bromochlormethane	0.03	0.03	0.17	0.85	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.02	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.34	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	4.96	0.25	0.010	U
67-66-3	Chloroform	0.06	0.19	0.33	1.63	0.96	0.037	J
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.27	1.37	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.90	0.18	0.007	U
71-43-2	Benzene	0.07	0.10	0.22	1.08	0.33	0.013	J
56-23-5	Carbon tetrachloride	0.06	0.06	0.42	2.10	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.75	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.56	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.44	2.22	0.44	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.80	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.36	1.82	0.36	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.94	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.25	1.27	0.25	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.55	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.88	0.18	0.007	J
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.03	0.20	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.52	2.62	0.52	0.020	U
127-18-4	Tetrachloroethene	0.06	0.06	0.45	2.27	0.45	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.31	1.54	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.85	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.48	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.59	2.93	0.59	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.44	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.84	0.17	0.007	U
95-47-6	o-Xylene	0.06	0.06	0.29	1.45	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.46	2.29	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.89	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.23	1.13	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.71	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.10	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.06	0.06	0.33	1.64	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.17	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.40	2.01	0.40	0.015	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.15	0.23	0.009	U
100-44-7	Benzyl chloride	0.07	0.07	0.40	3.99	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.80	8.04	0.80	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.43	4.32	0.43	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.79	7.88	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.12	8.49	2.12	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.00	10.02	1.00	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.44	14.41	1.44	0.055	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	10.015	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 05

File: 1007105A D	Date Sampled: 02/17/10	Time: 9:19
Description: SF-3CRD	Date Received: 02/18/10	
Can/Tube#: 726	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/04/10	Time: 15:04
QC_Batch: 030410-MS1	Can Dilution Factor: 1.28	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.72	0.34	0.013	U
74-87-3	Chloromethane	0.07	0.07	0.14	0.70	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.88	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.33	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.91	0.18	0.007	U
64-17-5	Ethanol	0.22	1.10	0.43	2.14	2.14	0.082	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.93	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.13	0.23	0.009	U
67-64-1	Acetone	0.07	5.68	0.18	3.58	13.93	0.536	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.58	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.33	0.26	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.58	0.52	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.19	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.14	0.18	0.88	0.44	0.017	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.48	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.23	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.35	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.77	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.76	0.18	0.91	5.35	0.206	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.86	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.04	0.15	0.008	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.35	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.00	0.25	0.010	U
67-66-3	Chloroform	0.07	0.17	0.33	1.65	0.87	0.033	J
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.84	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.38	0.28	0.011	U
583-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.91	0.18	0.007	U
71-43-2	Benzene	0.07	0.07	0.22	1.09	0.25	0.010	J
58-23-5	Carbon tetrachloride	0.07	0.07	0.42	2.12	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.76	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.58	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.24	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.81	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.83	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.06	0.19	0.94	0.27	0.010	J
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.59	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.26	1.28	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.56	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.84	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.88	0.19	0.007	J
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.04	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.53	2.64	0.53	0.020	U
127-18-4	Tetrachloroethene	0.07	0.07	0.46	2.29	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.31	1.55	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.86	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.49	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.59	2.96	0.59	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.45	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.85	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.29	1.46	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.46	2.31	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.90	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.23	1.14	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.72	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.11	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.33	1.66	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.18	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.03	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.16	0.23	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.40	4.02	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.81	8.10	0.81	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.35	0.44	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.79	7.95	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.14	8.56	2.14	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.01	10.10	1.01	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.45	14.52	1.45	0.056	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	9.813	98	70-130	

Notes 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 06

File: 1007106A D	Date Sampled: 02/17/10	Time: 14:19
Description: SF-MB-01	Date Received: 02/18/10	
Can/Tube#: 789	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/04/10	Time: 15:52
QC_Batch: 030410-MS1	Can Dilution Factor: 1.27	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.71	0.34	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.14	0.69	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.17	0.87	0.17	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.26	1.32	0.26	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.90	0.18	0.007	U
64-17-5	Ethanol	0.22	1.17	0.43	2.13	2.27	0.087	
75-89-4	Trichlorofluoromethane	0.07	0.07	0.38	1.92	0.38	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.12	0.22	0.008	U
67-64-1	Acetone	0.07	2.91	0.18	3.53	7.15	0.275	
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.57	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.31	0.26	0.010	U
76-13-1	Freon 113	0.06	0.06	0.51	2.56	0.51	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.18	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.05	0.17	0.87	0.17	0.007	U
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.45	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.21	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.34	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.74	0.19	0.007	U
78-93-3	2-Butanone	0.06	0.74	0.18	0.90	2.25	0.087	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.85	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.02	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.34	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	4.96	0.25	0.010	U
67-66-3	Chloroform	0.06	0.06	0.33	1.63	0.33	0.013	U
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.27	1.37	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.90	0.18	0.007	U
71-43-2	Benzene	0.07	0.07	0.22	1.08	0.22	0.008	U
56-23-5	Carbon tetrachloride	0.06	0.06	0.42	2.10	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.75	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.56	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.44	2.22	0.44	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.80	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.36	1.82	0.36	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.008	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.94	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.25	1.27	0.25	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.55	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.88	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.03	0.20	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.52	2.62	0.52	0.020	U
127-18-4	Tetrachloroethene	0.06	0.06	0.45	2.27	0.45	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.31	1.54	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.85	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.48	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.59	2.93	0.59	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.44	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.84	0.17	0.007	U
95-47-6	o-Xylene	0.06	0.06	0.29	1.45	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.46	2.29	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.89	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.23	1.13	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.71	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.10	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.06	0.06	0.33	1.64	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.17	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.40	2.01	0.40	0.015	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.15	0.23	0.009	U
100-44-7	Benzyl chloride	0.07	0.07	0.40	3.99	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.80	8.04	0.80	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.43	4.32	0.43	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.79	7.88	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.12	8.49	2.12	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.00	10.02	1.00	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.44	14.41	1.44	0.055	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	8.155	82	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 07

File: 1007107A.D	Date Sampled: 02/17/10	Time: 17:30
Description: SF-SB-01	Date Received: 02/23/10	
Can/Tube#: 541	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/04/10	Time: 16:41
QC_Batch: 030410-MS1	Can Dilution Factor: 1.26	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.69	0.34	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.14	0.69	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.17	0.86	0.17	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.26	1.31	0.26	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.89	0.18	0.007	U
64-17-5	Ethanol	0.22	0.79	0.42	2.11	1.54	0.059	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.38	1.90	0.38	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.12	0.22	0.008	U
67-64-1	Acetone	0.07	1.85	0.17	3.50	4.55	0.175	
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.57	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.30	0.26	0.010	U
76-13-1	Freon 113	0.06	0.06	0.51	2.54	0.51	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.23	1.17	0.23	0.009	U
75-15-0	Carbon disulfide	0.05	0.05	0.17	0.87	0.17	0.007	U
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.42	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.18	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.33	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.71	0.19	0.007	U
78-93-3	2-Butanone	0.06	0.47	0.18	0.90	1.43	0.055	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.85	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.00	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.06	0.06	0.27	1.33	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	4.92	0.25	0.010	U
67-66-3	Chloroform	0.06	0.06	0.32	1.62	0.32	0.012	U
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.81	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.06	0.06	0.27	1.36	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.90	0.18	0.007	U
71-43-2	Benzene	0.06	0.06	0.21	1.07	0.21	0.008	U
56-23-5	Carbon tetrachloride	0.06	0.06	0.42	2.09	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.75	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.06	0.06	0.31	1.55	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.44	2.20	0.44	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.80	0.16	0.006	U
79-01-6	Trichloroethene	0.06	0.06	0.36	1.80	0.36	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.81	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.93	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.31	1.57	0.31	0.012	U
108-88-3	Toluene	0.06	0.06	0.25	1.26	0.25	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.54	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.81	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.17	0.87	0.17	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.91	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.02	0.20	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.52	2.60	0.52	0.020	U
127-18-4	Tetrachloroethylene	0.06	0.06	0.45	2.25	0.45	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.31	1.53	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.85	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.29	1.47	0.29	0.011	U
108-38-3	m & p-Xylene	0.13	0.13	0.58	2.91	0.58	0.022	U
100-42-5	Styrene	0.06	0.06	0.29	1.43	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.83	0.17	0.007	U
95-47-6	o-Xylene	0.06	0.06	0.29	1.44	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.46	2.28	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.89	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.11	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.69	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.09	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.06	0.06	0.33	1.63	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.16	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.40	1.99	0.40	0.015	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.14	0.23	0.009	U
100-44-7	Benzyl chloride	0.07	0.07	0.40	3.96	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.80	7.98	0.80	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.43	4.28	0.43	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.78	7.82	0.78	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.11	8.42	2.11	0.081	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	0.99	9.94	0.99	0.038	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.43	14.29	1.43	0.055	U

Surrogate Recovery	Spike Amt ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	9.632	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

ENVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 08

File: 1007108.A.D

Date Sampled: 02/17/10 Time: 17:30

Description: SF-SB-02

Date Received: 02/23/10

Can/Tube#: 780

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/04/10

Time: 17:28

QC\_Batch: 030410-MS1

Can Dilution Factor: 1.27

2

Air Volume: 1000 ml

Flux Factor: 0.0385 0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.71	0.34	0.013	U
74-87-3	Chloromethane	0.06	0.06	0.14	0.69	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.17	0.87	0.17	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.26	1.32	0.26	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.90	0.18	0.007	U
64-17-5	Ethanol	0.22	0.92	0.43	2.13	1.79	0.069	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.38	1.92	0.38	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.22	1.12	0.22	0.008	U
67-64-1	Acetone	0.07	2.23	0.18	3.53	5.46	0.210	
4227-95-6	Methyl iodide	0.02	0.02	0.11	0.57	0.11	0.004	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.31	0.26	0.010	U
76-13-1	Freon 113	0.06	0.06	0.51	2.56	0.51	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.18	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.06	0.17	0.87	0.20	0.008	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.45	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.21	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.34	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.74	0.19	0.007	U
78-93-3	2-Butanone	0.06	0.68	0.18	0.90	2.08	0.080	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.85	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.02	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.34	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	4.96	0.25	0.010	U
67-66-3	Chloroform	0.06	0.06	0.33	1.63	0.33	0.013	U
71-55-6	1,1,1-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.27	1.37	0.27	0.010	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.90	0.18	0.007	U
71-43-2	Benzene	0.07	0.07	0.22	1.08	0.22	0.008	U
56-23-5	Carbon tetrachloride	0.06	0.06	0.42	2.10	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.75	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.56	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.44	2.22	0.44	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.80	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.36	1.82	0.36	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.94	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.25	1.27	0.26	0.010	J

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.55	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.06	0.06	0.36	1.82	0.36	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.88	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.20	1.03	0.20	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.52	2.62	0.52	0.020	U
127-18-4	Tetrachloroethene	0.06	0.06	0.45	2.27	0.45	0.017	U
108-90-7	Chlorobenzene	0.06	0.06	0.31	1.54	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.85	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.48	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.59	2.93	0.59	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.44	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.84	0.17	0.007	U
95-47-6	o-Xylene	0.06	0.06	0.29	1.45	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.06	0.06	0.46	2.29	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.89	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.23	1.13	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.71	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.10	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.06	0.06	0.33	1.64	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.23	1.17	0.23	0.009	U
541-73-1	1,3-Dichlorobenzene	0.06	0.06	0.40	2.01	0.40	0.015	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.15	0.23	0.009	U
100-44-7	Benzyl chloride	0.07	0.07	0.40	3.99	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.80	8.04	0.80	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.43	4.32	0.43	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.79	7.88	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.12	8.49	2.12	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.00	10.02	1.00	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.44	14.41	1.44	0.055	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	9.594	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.88 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 09

File: 1007109B.D

Date Sampled: 02/18/10

Time: 9:12

Description: SF-3E

Date Received: 02/23/10

Can/Tube#: 693

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/04/10

Time: 19:08

QC\_Batch: 030410-MS1

Can Dilution Factor: 1.28

Air Volume: 1000 ml

Flux Factor:

0.0385 0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.72	0.34	0.013	U
74-87-3	Chloromethane	0.07	0.07	0.14	0.70	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.88	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.33	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.91	0.18	0.007	U
64-17-5	Ethanol	0.22	0.60	0.43	2.14	1.18	0.045	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.93	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.13	0.23	0.009	U
67-64-1	Acetone	0.07	1.83	0.18	3.56	4.48	0.172	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.58	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.33	0.26	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.58	0.52	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.19	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.63	0.18	0.88	2.03	0.078	
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.48	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.23	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.35	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.77	0.19	0.007	U
78-93-3	2-Butanone	0.06	0.59	0.18	0.91	1.79	0.069	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.86	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.04	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.35	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.00	0.25	0.010	U
67-66-3	Chloroform	0.07	0.10	0.33	1.65	0.52	0.020	J
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.84	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.38	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.91	0.18	0.007	U
71-43-2	Benzene	0.07	0.08	0.22	1.09	0.27	0.010	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.42	2.12	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.76	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.58	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.24	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.81	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.83	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.94	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.59	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.26	1.28	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.56	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.84	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.88	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.04	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.53	2.64	0.53	0.020	U
127-18-4	Tetrachloroethene	0.07	0.07	0.46	2.29	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.31	1.55	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.86	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.49	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.59	2.96	0.59	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.45	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.85	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.29	1.46	0.29	0.011	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.46	2.31	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.90	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.22	1.12	0.22	0.008	U
98-82-8	Isopropylbenzene	0.04	0.04	0.23	1.14	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.34	1.72	0.34	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.11	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.33	1.66	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.18	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.03	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.16	0.23	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.40	4.02	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.81	8.10	0.81	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.35	0.44	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.79	7.95	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.14	8.56	2.14	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.01	10.10	1.01	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.45	14.52	1.45	0.056	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	10.695	107	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 10

File: 1007110A.D	Date Sampled: 02/18/10	Time: 9:12
Description: SF-3N	Date Received: 02/23/10	
Can/Tube#: 510	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/04/10	Time: 19:59
QC_Batch: 030410-MS1	Can Dilution Factor: 1.31	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.35	1.76	0.35	0.013	U
74-87-3	Chloromethane	0.07	0.07	0.14	0.71	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.90	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.36	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.19	0.93	0.19	0.007	U
64-17-5	Ethanol	0.23	1.16	0.44	2.19	2.25	0.087	
75-69-4	Trichlorofluoromethane	0.07	0.07	0.40	1.98	0.40	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.16	0.23	0.009	U
67-64-1	Acetone	0.07	3.94	0.18	3.64	9.66	0.372	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.59	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.36	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.53	2.64	0.53	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.22	0.24	0.009	U
75-15-0	Carbon disulfide	0.06	0.06	0.18	0.90	0.20	0.008	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.56	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.17	3.31	0.17	0.007	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.28	1.39	0.28	0.011	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.85	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.43	0.19	0.93	4.36	0.168	
74-97-5	Bromochloromethane	0.03	0.03	0.18	0.88	0.18	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.16	3.12	0.16	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.28	1.38	0.28	0.011	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.26	5.12	0.26	0.010	U
67-66-3	Chloroform	0.07	0.25	0.34	1.68	1.24	0.048	J
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.38	1.88	0.38	0.015	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.41	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.19	0.93	0.19	0.007	U
71-43-2	Benzene	0.07	0.08	0.22	1.11	0.27	0.010	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.43	2.17	0.43	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.78	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.61	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.46	2.29	0.46	0.018	U
74-95-3	Dibromomethane	0.02	0.02	0.17	0.83	0.17	0.007	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.88	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.84	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.05	0.19	0.96	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.33	1.63	0.33	0.013	U
108-88-3	Toluene	0.07	0.07	0.26	1.31	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.32	1.60	0.32	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.38	1.88	0.38	0.015	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.90	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.94	0.19	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.06	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.54	2.70	0.54	0.021	U
127-18-4	Tetrachloroethylene	0.07	0.07	0.47	2.34	0.47	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.32	1.59	0.32	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.18	0.88	0.18	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.31	1.53	0.31	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.61	3.03	0.61	0.023	U
100-42-5	Styrene	0.07	0.07	0.30	1.49	0.30	0.012	U
75-25-2	Bromoform	0.02	0.02	0.17	0.87	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.50	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.47	2.37	0.47	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.92	0.18	0.007	U
103-65-1	n-Propylbenzene	0.05	0.05	0.23	1.15	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.16	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.35	1.76	0.35	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.23	1.14	0.23	0.009	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.34	1.70	0.34	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.21	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.07	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.24	1.19	0.24	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.12	0.41	0.016	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.83	8.29	0.83	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.45	4.45	0.45	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.81	8.13	0.81	0.031	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.19	8.76	2.19	0.084	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.03	10.34	1.03	0.040	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.49	14.86	1.49	0.057	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	10.414	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 11

File: 1007111A.D

Date Sampled: 02/18/10

Time: 12:47

Description: SF-4N

Date Received: 02/23/10

Can/Tube#: 608

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/04/10

Time: 20:59

QC\_Batch: 030410-MS1

Can Dilution Factor: 1.30

Air Volume: 1000 ml

Flux Factor:

2

0.0385 0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.35	1.75	0.35	0.013	U
74-87-3	Chloromethane	0.07	0.18	0.14	0.71	0.37	0.014	J
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.89	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.35	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.08	0.18	0.92	0.23	0.009	J
64-17-5	Ethanol	0.22	0.31	0.44	2.18	0.60	0.023	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.96	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.15	0.23	0.009	U
67-64-1	Acetone	0.07	6.81	0.18	3.61	16.71	0.643	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.59	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.35	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.62	0.52	0.020	U
75-09-2	Dichlormethane	0.07	0.07	0.24	1.21	0.24	0.009	U
75-15-0	Carbon disulfide	0.06	0.48	0.18	0.89	1.55	0.060	
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.53	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.28	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.27	1.38	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.82	0.19	0.007	U
78-93-3	2-Butanone	0.06	2.31	0.19	0.93	7.02	0.270	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.87	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.09	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.37	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.08	0.25	0.010	U
67-66-3	Chloroform	0.07	0.08	0.33	1.67	0.38	0.015	J
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.87	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.40	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.93	0.18	0.007	U
71-43-2	Benzene	0.07	0.10	0.22	1.11	0.33	0.013	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.43	2.15	0.43	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.77	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.60	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.27	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.17	0.82	0.17	0.007	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.86	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.84	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.07	0.19	0.96	0.29	0.011	J
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.61	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.26	1.30	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.87	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.05	0.18	0.90	0.23	0.009	J
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.94	0.19	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.05	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.54	2.68	0.54	0.021	U
127-18-4	Tetrachloroethylene	0.07	0.07	0.46	2.32	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.32	1.58	0.32	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.18	0.88	0.18	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.52	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.60	3.00	0.60	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.48	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.86	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.49	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.47	2.35	0.47	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.91	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.23	1.14	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.15	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.35	1.75	0.35	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.13	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.34	1.68	0.34	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.20	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.06	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.24	1.18	0.24	0.009	J
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.09	0.41	0.016	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.82	8.23	0.82	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.42	0.44	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.81	8.07	0.81	0.031	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.17	8.69	2.17	0.084	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.03	10.26	1.03	0.040	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.47	14.75	1.47	0.057	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	10.159	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

## ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 12

File: 1007112A.D	Date Sampled: 02/18/10	Time: 12:47
Description: SF-4E	Date Received: 02/23/10	
Can/Tube#: 696	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/05/10	Time: 17:30
QC_Batch: 030510-MS1	Can Dilution Factor: 1.30	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.35	1.75	0.35	0.013	U
74-87-3	Chloromethane	0.07	0.07	0.14	0.71	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.89	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.35	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.92	0.18	0.007	U
64-17-5	Ethanol	0.22	1.04	0.44	2.18	2.02	0.078	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.96	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.15	0.23	0.009	U
67-64-1	Acetone	0.07	3.58	0.18	3.61	8.78	0.338	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.59	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.35	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.62	0.52	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.21	0.24	0.009	U
75-15-0	Carbon disulfide	0.06	0.06	0.18	0.89	0.18	0.007	U
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.53	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.28	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.27	1.38	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.82	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.23	0.19	0.93	3.76	0.145	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.87	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.09	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.37	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.08	0.25	0.010	U
67-66-3	Chloroform	0.07	0.08	0.33	1.67	0.40	0.015	J
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.87	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.40	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.93	0.18	0.007	U
71-43-2	Benzene	0.07	0.09	0.22	1.11	0.28	0.011	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.43	2.15	0.43	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.77	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.60	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.27	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.17	0.82	0.17	0.007	U
79-01-6	Trichloroethene	0.07	2.58	0.37	1.86	14.33	0.552	
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.84	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.05	0.19	0.96	0.22	0.008	J
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.61	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.26	1.30	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.87	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.90	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.94	0.19	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.05	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.54	2.68	0.54	0.021	U
127-18-4	Tetrachloroethene	0.07	0.07	0.46	2.32	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.32	1.58	0.32	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.18	0.88	0.18	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.52	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.60	3.00	0.60	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.48	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.86	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.49	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.47	2.35	0.47	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.91	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.23	1.14	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.15	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.35	1.75	0.35	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.13	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.34	1.68	0.34	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.20	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.06	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.24	1.18	0.24	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.09	0.41	0.016	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.82	8.23	0.82	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.42	0.44	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.81	8.07	0.81	0.031	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.17	8.69	2.17	0.084	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.03	10.26	1.03	0.040	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.47	14.75	1.47	0.057	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	10.079	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 13

File: 1007113A.D	Date Sampled: 02/18/10	Time: 13:32
Description: SF-4CR	Date Received: 02/23/10	
Can/Tube#: 716	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/05/10	Time: 18:23
QC_Batch: 030510-MS1	Can Dilution Factor: 1.29	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.35	1.73	0.35	0.013	U
74-87-3	Chloromethane	0.07	0.12	0.14	0.70	0.26	0.010	J
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.89	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.34	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.91	0.18	0.007	U
64-17-5	Ethanol	0.22	1.31	0.43	2.16	2.55	0.098	
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.95	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.14	0.23	0.009	U
67-64-1	Acetone	0.07	3.57	0.18	3.58	8.77	0.338	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.58	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.34	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.60	0.52	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.20	0.24	0.009	U
75-15-0	Carbon disulfide	0.06	0.14	0.18	0.89	0.46	0.018	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.51	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.26	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.27	1.36	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.79	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.15	0.18	0.92	3.50	0.135	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.87	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.07	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.36	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.04	0.25	0.010	U
67-66-3	Chloroform	0.07	0.07	0.33	1.66	0.33	0.013	U
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.85	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.39	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.92	0.18	0.007	U
71-43-2	Benzene	0.07	0.08	0.22	1.10	0.28	0.011	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.43	2.14	0.43	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.76	0.15	0.008	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.59	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.26	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.81	0.16	0.008	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.85	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.83	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.95	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.60	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.26	1.29	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.57	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.85	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.89	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.93	0.19	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.04	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.53	2.66	0.53	0.020	U
127-18-4	Tetrachloroethene	0.07	0.07	0.46	2.30	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.31	1.56	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.87	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.50	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.60	2.98	0.60	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.46	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.85	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.48	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.47	2.33	0.47	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.91	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.23	1.13	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.15	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.35	1.74	0.35	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.12	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.33	1.67	0.33	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.19	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.04	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.23	1.17	0.23	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.06	0.41	0.016	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.82	8.17	0.82	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.39	0.44	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.80	8.01	0.80	0.031	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.16	8.62	2.16	0.083	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.02	10.18	1.02	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.46	14.63	1.46	0.056	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag * = Out	
Toluene-d8		10.000		8.137		70-130		

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 14

File: 1007114A.D	Date Sampled: 02/18/10	Time: 13:40
Description: SF-4CRD	Date Received: 02/23/10	
Can/Tube#: 692	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/05/10	Time: 19:11
QC_Batch: 030510-MS1	Can Dilution Factor: 1.30	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.36	1.75	0.35	0.013	U
74-87-3	Chloromethane	0.07	0.08	0.14	0.71	0.17	0.007	J
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.89	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.35	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.92	0.18	0.007	U
64-17-5	Ethanol	0.22	2.07	0.44	2.18	4.04	0.156	
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.96	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.15	0.23	0.009	U
67-64-1	Acetone	0.07	4.78	0.18	3.61	11.73	0.452	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.59	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.35	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.62	0.52	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.21	0.24	0.009	U
75-15-0	Carbon disulfide	0.06	0.12	0.18	0.89	0.40	0.015	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.53	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.28	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.27	1.38	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.82	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.09	0.19	0.93	3.33	0.128	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.87	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.09	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.37	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.08	0.25	0.010	U
67-66-3	Chloroform	0.07	0.07	0.33	1.67	0.33	0.013	U
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.87	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.40	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.93	0.18	0.007	U
71-43-2	Benzene	0.07	0.08	0.22	1.11	0.27	0.010	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.43	2.15	0.43	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.77	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.60	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.27	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.17	0.82	0.17	0.007	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.86	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.84	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.05	0.19	0.96	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.61	0.32	0.012	U
108-88-3	Toluene	0.07	0.07	0.26	1.30	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.32	1.58	0.32	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.87	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.90	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.94	0.19	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.05	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.54	2.68	0.54	0.021	U
127-18-4	Tetrachloroethene	0.07	0.07	0.46	2.32	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.32	1.58	0.32	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.18	0.88	0.18	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.30	1.52	0.30	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.60	3.00	0.60	0.023	U
100-42-5	Styrene	0.07	0.07	0.29	1.48	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.86	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.49	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.47	2.35	0.47	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.91	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.04	0.23	1.14	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.15	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.35	1.75	0.35	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.22	1.13	0.22	0.008	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.34	1.68	0.34	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.20	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.06	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.24	1.18	0.24	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.09	0.41	0.016	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.82	8.23	0.82	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.42	0.44	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.81	8.07	0.81	0.031	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.17	8.69	2.17	0.084	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.03	10.26	1.03	0.040	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.47	14.75	1.47	0.057	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag	
Toluene-d8		10.000		10.351		104	70-130	* = Out

Notes: 1) Reported results are to be Interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J Is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 15

File: 1007115A.D	Date Sampled: 02/18/10	Time: 13:32
Description: SF-4C	Date Received: 02/23/10	
Can/Tube#: 612	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/05/10	Time: 20:29
QC_Batch: 030510-MS1	Can Dilution Factor: 1.32	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.35	1.77	0.35	0.013	U
74-87-3	Chloromethane	0.07	0.18	0.14	0.72	0.39	0.015	J
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.91	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.28	1.38	0.28	0.011	U
75-00-3	Chloroethane	0.07	0.07	0.19	0.93	0.19	0.007	U
64-17-5	Ethanol	0.23	2.07	0.44	2.21	4.04	0.156	
75-69-4	Trichlorofluoromethane	0.07	0.07	0.40	1.99	0.40	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.17	0.23	0.009	U
67-64-1	Acetone	0.07	4.06	0.18	3.67	9.95	0.383	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.60	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.37	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.53	2.66	0.53	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.25	1.23	0.25	0.010	U
75-15-0	Carbon disulfide	0.06	1.87	0.18	0.91	6.02	0.232	
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.59	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.17	3.33	0.17	0.007	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.28	1.40	0.28	0.011	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.88	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.07	0.19	0.94	3.25	0.125	
74-97-5	Bromochloromethane	0.03	0.03	0.18	0.89	0.18	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.16	3.14	0.16	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.28	1.39	0.28	0.011	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.26	5.16	0.26	0.010	U
67-66-3	Chloroform	0.07	0.07	0.34	1.70	0.34	0.013	U
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.38	1.90	0.38	0.015	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.42	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.19	0.94	0.19	0.007	U
71-43-2	Benzene	0.07	0.12	0.22	1.12	0.39	0.015	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.44	2.19	0.44	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.16	0.78	0.16	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.63	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.46	2.31	0.46	0.018	U
74-95-3	Dibromomethane	0.02	0.02	0.17	0.83	0.17	0.007	U
79-01-6	Trichloroethene	0.07	0.07	0.38	1.89	0.38	0.015	U
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.85	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.05	0.19	0.97	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.33	1.64	0.33	0.013	U
108-88-3	Toluene	0.07	0.07	0.26	1.32	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.32	1.61	0.32	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.38	1.90	0.38	0.015	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.91	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.95	0.19	0.007	U
124-48-1	Dibromochlormethane	0.02	0.02	0.21	1.07	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.54	2.72	0.54	0.021	U
127-18-4	Tetrachloroethylene	0.07	0.07	0.47	2.36	0.47	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.32	1.60	0.32	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.03	0.03	0.18	0.89	0.18	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.31	1.54	0.31	0.012	U
108-38-3	m & p-Xylene	0.14	0.14	0.61	3.05	0.61	0.023	U
100-42-5	Styrene	0.07	0.07	0.30	1.50	0.30	0.012	U
75-25-2	Bromoform	0.02	0.02	0.17	0.87	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.51	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.48	2.39	0.48	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.19	0.93	0.19	0.007	U
103-65-1	n-Propylbenzene	0.05	0.05	0.23	1.16	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.17	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.36	1.78	0.36	0.014	U
98-06-6	tert-butyl benzene	0.04	0.04	0.23	1.14	0.23	0.009	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.34	1.71	0.34	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.22	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.42	2.09	0.42	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.24	1.20	0.24	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.15	0.41	0.016	U
108-46-7	1,4-Dichlorobenzene	0.13	0.13	0.84	8.36	0.84	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.45	4.49	0.45	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.82	8.19	0.82	0.032	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.21	8.83	2.21	0.085	U
120-82-1	1,2,4-Trichlorobenzene	0.14	0.14	1.04	10.42	1.04	0.040	U
87-68-3	Hexachlorobutadiene	0.14	0.14	1.50	14.97	1.50	0.058	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	9.594	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit. LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 18

File: 1007116.A.D

Date Sampled: 02/18/10 Time: 14:19

Description: SF-MB-02

Date Received: 02/23/10

Can/Tube#: 992

Date Extracted:

Sam\_Type: SA

Date Analyzed: 03/05/10

QC\_Batch: 030510-MS1

Can Dilution Factor: 1.00

Air Volume: 1000 ml

Flux Factor: 0.0385 0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.05	0.05	0.27	1.34	0.27	0.010	U
74-87-3	Chloromethane	0.05	0.05	0.11	0.54	0.11	0.004	U
75-01-4	Vinyl chloride	0.05	0.05	0.14	0.69	0.14	0.005	U
74-83-9	Bromomethane	0.05	0.05	0.21	1.04	0.21	0.008	U
75-00-3	Chloroethane	0.05	0.05	0.14	0.71	0.14	0.005	U
64-17-5	Ethanol	0.17	1.10	0.33	1.67	2.13	0.082	
75-69-4	Trichlorofluoromethane	0.05	0.05	0.30	1.51	0.30	0.012	U
75-05-8	Acetonitrile	0.10	0.10	0.18	0.89	0.18	0.007	U
67-64-1	Acetone	0.06	1.77	0.14	2.78	4.34	0.167	
4227-95-6	Methyl iodide	0.02	0.02	0.09	0.45	0.09	0.003	U
75-35-4	1,1-Dichloroethene	0.05	0.05	0.21	1.04	0.21	0.008	U
76-13-1	Freon 113	0.05	0.05	0.40	2.02	0.40	0.015	U
75-09-2	Dichloromethane	0.05	0.05	0.19	0.93	0.19	0.007	U
75-15-0	Carbon disulfide	0.04	0.04	0.14	0.69	0.14	0.005	U
156-60-5	trans-1,2-Dichloroethene	0.03	0.03	0.14	2.72	0.14	0.005	U
1634-04-4	Methyl tert butyl ether	0.03	0.03	0.13	2.53	0.13	0.005	U
75-34-3	1,1-Dichloroethane	0.05	0.05	0.21	1.06	0.21	0.008	U
108-05-4	Vinyl acetate	0.04	0.04	0.15	2.94	0.15	0.006	U
78-93-3	2-Butanone	0.05	0.64	0.14	0.71	1.96	0.075	
74-97-5	Bromochloromethane	0.02	0.02	0.13	0.67	0.13	0.005	U
78-83-1	Isobutyl alcohol	0.04	0.04	0.12	2.38	0.12	0.005	U
156-59-2	cis-1,2-Dichloroethene	0.05	0.05	0.21	1.06	0.21	0.008	U
594-20-7	2,2-Dichloropropane	0.04	0.04	0.20	3.91	0.20	0.008	U
67-66-3	Chloroform	0.05	0.05	0.26	1.29	0.26	0.010	U
71-55-6	1,1,1-Trichloroethane	0.05	0.05	0.29	1.44	0.29	0.011	U
107-06-2	1,2-Dichloroethane	0.05	0.05	0.22	1.08	0.22	0.008	U
563-58-6	1,1-Dichloropropene	0.03	0.03	0.14	0.71	0.14	0.005	U
71-43-2	Benzene	0.05	0.06	0.17	0.85	0.21	0.008	J
56-23-5	Carbon tetrachloride	0.05	0.05	0.33	1.66	0.33	0.013	U
142-82-5	n-Heptane	0.03	0.03	0.12	0.59	0.12	0.005	U
78-87-5	1,2-Dichloropropane	0.05	0.05	0.25	1.23	0.25	0.010	U
123-91-1	1,4 Dioxane	0.09	0.09	0.35	1.75	0.35	0.013	U
74-95-3	Dibromomethane	0.02	0.02	0.13	0.63	0.13	0.005	U
79-01-6	Trichloroethene	0.05	0.05	0.29	1.43	0.29	0.011	U
75-27-4	Bromodichloromethane	0.02	0.02	0.13	0.64	0.13	0.005	U
108-10-1	Methyl Isobutyl Ketone	0.03	0.03	0.15	0.74	0.15	0.006	U
10061-01-5	cis-1,3-Dichloropropene	0.05	0.05	0.25	1.24	0.25	0.010	U
108-88-3	Toluene	0.05	0.05	0.20	1.00	0.20	0.008	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.05	0.05	0.24	1.22	0.24	0.009	U
79-00-5	1,1,2-Trichloroethane	0.05	0.05	0.29	1.44	0.29	0.011	U
591-78-6	2-Hexanone	0.03	0.03	0.14	0.69	0.14	0.005	U
142-28-9	1,3-Dichloropropane	0.03	0.03	0.14	0.72	0.14	0.005	U
124-48-1	Dibromochlormethane	0.02	0.02	0.16	0.81	0.16	0.006	U
106-93-4	1,2-Dibromoethane	0.05	0.05	0.41	2.06	0.41	0.016	U
127-18-4	Tetrachloroethene	0.05	0.05	0.36	1.79	0.36	0.014	U
108-90-7	Chlorobenzene	0.05	0.05	0.24	1.21	0.24	0.009	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.13	0.67	0.13	0.005	U
100-41-4	Ethylbenzene	0.05	0.05	0.23	1.17	0.23	0.009	U
108-38-3	m & p-Xylene	0.10	0.10	0.46	2.31	0.46	0.018	U
100-42-5	Styrene	0.05	0.05	0.23	1.14	0.23	0.009	U
75-25-2	Bromoform	0.01	0.01	0.13	0.66	0.13	0.005	U
95-47-6	o-Xylene	0.05	0.05	0.23	1.14	0.23	0.009	U
79-34-5	1,1,2,2-Tetrachloroethane	0.05	0.05	0.36	1.81	0.36	0.014	U
96-18-4	1,2,3-Trichloropropane	0.02	0.02	0.14	0.70	0.14	0.005	U
103-65-1	n-Propylbenzene	0.03	0.03	0.18	0.88	0.18	0.007	U
98-82-8	Isopropylbenzene	0.04	0.04	0.18	0.89	0.18	0.007	U
108-67-8	1,3,5-Trimethylbenzene	0.05	0.05	0.27	1.35	0.27	0.010	U
98-06-6	tert-butyl benzene	0.03	0.03	0.17	0.87	0.17	0.007	U
95-63-6	1,2,4-Trimethylbenzene	0.05	0.05	0.26	1.29	0.26	0.010	U
135-98-8	sec-butylbenzene	0.03	0.03	0.18	0.92	0.18	0.007	U
541-73-1	1,3-Dichlorobenzene	0.05	0.05	0.32	1.58	0.32	0.012	U
99-87-6	Isopropyltoluene	0.03	0.03	0.18	0.91	0.18	0.007	U
100-44-7	Benzyl chloride	0.06	0.06	0.31	3.14	0.31	0.012	U
106-46-7	1,4-Dichlorobenzene	0.10	0.10	0.63	6.33	0.63	0.024	U
104-51-8	n-Butylbenzene	0.06	0.06	0.34	3.40	0.34	0.013	U
95-50-1	1,2-Dichlorobenzene	0.10	0.10	0.62	6.21	0.62	0.024	U
96-12-8	1,2-Dibromo-3-chloropropane	0.17	0.17	1.67	6.69	1.67	0.064	U
120-82-1	1,2,4-Trichlorobenzene	0.10	0.10	0.79	7.89	0.79	0.030	U
87-68-3	Hexachlorobutadiene	0.10	0.10	1.13	11.34	1.13	0.044	U

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	10.000	9.876	99	70-130	

Notes. 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRO NMENTAL  
Analytical Service, Inc.

**EPA Method TO-15 Modified Full Scan GC/MS**
**Analytical Method:** TO-15

**SDG:** 210071

**Laboratory Number:** 17

**File:** 1007117A.D

**Date Sampled:** 02/19/10    **Time:** 11:49

**Description:** SF-4W

**Date Received:** 02/23/10

**Can/Tube#:** 718

**Date Extracted:**
**Sam\_Type:** SA

**Date Analyzed:** 03/07/10

**QC\_Batch:** 030710-MS1

**Can Dilution Factor:** 1.28

**Time:** 14:54

**Air Volume:** 1000 ml

**Flux Factor:** 2

**0.0385 0.0036**

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.07	0.34	1.72	0.34	0.013	U
74-87-3	Chloromethane	0.07	0.07	0.14	0.70	0.14	0.005	U
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.88	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.33	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.18	0.91	0.18	0.007	U
64-17-5	Ethanol	0.22	0.24	0.43	2.14	0.46	0.018	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.39	1.93	0.39	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.13	0.23	0.009	U
67-64-1	Acetone	0.07	1.38	0.18	3.56	3.39	0.131	J
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.58	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.06	0.06	0.26	1.33	0.26	0.010	U
76-13-1	Freon 113	0.07	0.07	0.52	2.58	0.52	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.19	0.24	0.009	U
75-15-0	Carbon disulfide	0.05	0.10	0.18	0.88	0.33	0.013	J
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.17	3.48	0.17	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.16	3.23	0.16	0.006	U
75-34-3	1,1-Dichloroethane	0.06	0.06	0.27	1.35	0.27	0.010	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.77	0.19	0.007	U
78-93-3	2-Butanone	0.06	0.49	0.18	0.91	1.49	0.057	
74-97-5	Bromochloromethane	0.03	0.03	0.17	0.86	0.17	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.15	3.04	0.15	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.27	1.35	0.27	0.010	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.25	5.00	0.25	0.010	U
67-66-3	Chloroform	0.07	0.07	0.33	1.65	0.33	0.013	U
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.37	1.84	0.37	0.014	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.38	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.18	0.91	0.18	0.007	U
71-43-2	Benzene	0.07	0.56	0.22	1.09	1.84	0.071	
56-23-5	Carbon tetrachloride	0.07	0.07	0.42	2.12	0.42	0.016	U
142-82-5	n-Heptane	0.04	0.18	0.15	0.76	0.75	0.029	J
78-87-5	1,2-Dichloropropane	0.07	0.07	0.31	1.58	0.31	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.45	2.24	0.45	0.017	U
74-95-3	Dibromomethane	0.02	0.02	0.16	0.81	0.16	0.006	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.83	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.16	0.82	0.16	0.006	U
108-10-1	Methyl Isobutyl Ketone	0.04	0.04	0.19	0.94	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.32	1.59	0.32	0.012	U
108-88-3	Toluene	0.07	0.38	0.26	1.28	1.46	0.056	

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.31	1.56	0.31	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.37	1.84	0.37	0.014	U
591-78-6	2-Hexanone	0.04	0.04	0.18	0.88	0.18	0.007	U
142-28-9	1,3-Dichloropropane	0.04	0.04	0.18	0.92	0.18	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.04	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.53	2.64	0.53	0.020	U
127-18-4	Tetrachloroethene	0.07	0.07	0.46	2.29	0.46	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.31	1.55	0.31	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.17	0.86	0.17	0.007	U
100-41-4	Ethylbenzene	0.07	0.19	0.30	1.49	0.86	0.033	J
108-38-3	m & p-Xylene	0.13	1.22	0.59	2.96	5.49	0.211	
100-42-5	Styrene	0.07	0.07	0.29	1.45	0.29	0.011	U
75-25-2	Bromoform	0.02	0.02	0.17	0.85	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.21	0.29	1.46	0.92	0.035	J
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.46	2.31	0.46	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.90	0.18	0.007	U
103-65-1	n-Propylbenzene	0.04	0.10	0.22	1.12	0.50	0.019	J
98-82-8	Isopropylbenzene	0.04	0.30	0.23	1.14	1.54	0.059	
108-67-8	1,3,5-Trimethylbenzene	0.07	0.18	0.34	1.72	0.93	0.036	J
98-06-6	tert-butyl benzene	0.04	0.07	0.22	1.11	0.40	0.015	J
95-63-6	1,2,4-Trimethylbenzene	0.07	0.40	0.33	1.66	2.05	0.079	
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.18	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.03	0.41	0.016	U
99-87-6	Isopropylcluene	0.04	0.04	0.23	1.16	0.23	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.40	4.02	0.40	0.015	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.81	8.10	0.81	0.031	U
104-51-8	n-Butylbenzene	0.08	0.08	0.44	4.35	0.44	0.017	U
95-50-1	1,2-Dichlrobenzene	0.13	0.13	0.79	7.95	0.79	0.030	U
96-12-8	1,2-Dibromo-3-chloropropane	0.21	0.21	2.14	8.56	2.14	0.082	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.01	10.10	1.01	0.039	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.45	14.52	1.45	0.056	U
<u>Surrogate Recovery</u>		Spike Amt. ppbV		Amount ppbV		QC % Rec.	Flag	
Toluene-d8		10.000		9.865		99	70-130	* = Out

Notes: 1) Reported results are to be interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23.68 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

# ANALYTICAL REPORT

**E**NVIRONMENTAL  
Analytical Service, Inc.

## EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 210071

Laboratory Number: 18

File: 1007118.B.D	Date Sampled: 02/19/10	Time: 11:49
Description: SF-4S	Date Received: 02/23/10	
Can/Tube#: 605	Date Extracted:	
Sam_Type: SA	Date Analyzed: 03/07/10	Time: 16:38
QC_Batch: 030710-MS1	Can Dilution Factor: 1.31	2
Air Volume: 1000 ml	Flux Factor: 0.0385	0.0036

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m2*min)	Flag
75-71-8	Dichlorodifluoromethane	0.07	0.12	0.35	1.76	0.61	0.023	J
74-87-3	Chloromethane	0.07	0.13	0.14	0.71	0.27	0.010	J
75-01-4	Vinyl chloride	0.07	0.07	0.18	0.90	0.18	0.007	U
74-83-9	Bromomethane	0.07	0.07	0.27	1.36	0.27	0.010	U
75-00-3	Chloroethane	0.07	0.07	0.19	0.93	0.19	0.007	U
64-17-5	Ethanol	0.23	1.07	0.44	2.19	2.09	0.080	J
75-69-4	Trichlorofluoromethane	0.07	0.07	0.40	1.98	0.40	0.015	U
75-05-8	Acetonitrile	0.13	0.13	0.23	1.16	0.23	0.009	U
67-64-1	Acetone	0.07	4.30	0.18	3.64	10.54	0.406	
4227-95-6	Methyl iodide	0.02	0.02	0.12	0.59	0.12	0.005	U
75-35-4	1,1-Dichloroethene	0.07	0.07	0.27	1.36	0.27	0.010	U
76-13-1	Freon 113	0.07	0.07	0.53	2.64	0.53	0.020	U
75-09-2	Dichloromethane	0.07	0.07	0.24	1.22	0.24	0.009	U
75-15-0	Carbon disulfide	0.06	0.06	0.18	0.90	0.18	0.007	U
156-60-5	trans-1,2-Dichloroethene	0.04	0.04	0.18	3.56	0.18	0.007	U
1634-04-4	Methyl tert butyl ether	0.04	0.04	0.17	3.31	0.17	0.007	U
75-34-3	1,1-Dichloroethane	0.07	0.07	0.28	1.39	0.28	0.011	U
108-05-4	Vinyl acetate	0.05	0.05	0.19	3.85	0.19	0.007	U
78-93-3	2-Butanone	0.06	1.09	0.19	0.93	3.33	0.128	
74-97-5	Bromochloromethane	0.03	0.03	0.18	0.88	0.18	0.007	U
78-83-1	Isobutyl alcohol	0.05	0.05	0.16	3.12	0.18	0.006	U
156-59-2	cis-1,2-Dichloroethene	0.07	0.07	0.28	1.38	0.28	0.011	U
594-20-7	2,2-Dichloropropane	0.05	0.05	0.26	5.12	0.26	0.010	U
67-66-3	Chloroform	0.07	0.07	0.34	1.68	0.34	0.013	U
71-55-6	1,1,1-Trichloroethane	0.07	0.07	0.38	1.88	0.38	0.015	U
107-06-2	1,2-Dichloroethane	0.07	0.07	0.28	1.41	0.28	0.011	U
563-58-6	1,1-Dichloropropene	0.04	0.04	0.19	0.93	0.19	0.007	U
71-43-2	Benzene	0.07	0.10	0.22	1.11	0.33	0.013	J
56-23-5	Carbon tetrachloride	0.07	0.07	0.43	2.17	0.43	0.017	U
142-82-5	n-Heptane	0.04	0.04	0.15	0.78	0.15	0.006	U
78-87-5	1,2-Dichloropropane	0.07	0.07	0.32	1.61	0.32	0.012	U
123-91-1	1,4 Dioxane	0.12	0.12	0.46	2.29	0.46	0.018	J
74-95-3	Dibromomethane	0.02	0.02	0.17	0.83	0.17	0.007	U
79-01-6	Trichloroethene	0.07	0.07	0.37	1.88	0.37	0.014	U
75-27-4	Bromodichloromethane	0.02	0.02	0.17	0.84	0.17	0.007	U
108-10-1	Methyl Isobutyl Ketone	0.05	0.05	0.19	0.96	0.19	0.007	U
10061-01-5	cis-1,3-Dichloropropene	0.07	0.07	0.33	1.63	0.33	0.013	U
108-88-3	Toluene	0.07	0.07	0.26	1.31	0.26	0.010	U

CAS#	Compound	MDL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flux ug/(m <sup>2</sup> *min)	Flag
10061-02-6	trans-1,3-Dichloropropene	0.07	0.07	0.32	1.60	0.32	0.012	U
79-00-5	1,1,2-Trichloroethane	0.07	0.07	0.38	1.88	0.38	0.015	U
591-78-6	2-Hexanone	0.04	0.05	0.18	0.90	0.20	0.008	J
142-28-9	1,3-Dichloropropane	0.04	0.04	0.19	0.94	0.19	0.007	U
124-48-1	Dibromochloromethane	0.02	0.02	0.21	1.06	0.21	0.008	U
106-93-4	1,2-Dibromoethane	0.07	0.07	0.54	2.70	0.54	0.021	U
127-18-4	Tetrachloroethene	0.07	0.07	0.47	2.34	0.47	0.018	U
108-90-7	Chlorobenzene	0.07	0.07	0.32	1.59	0.32	0.012	U
630-20-6	1,1,1,2-Tetrachloroethane	0.02	0.02	0.18	0.88	0.18	0.007	U
100-41-4	Ethylbenzene	0.07	0.07	0.31	1.53	0.31	0.012	U
108-38-3	m & p-Xylene	0.13	0.13	0.61	3.03	0.61	0.023	U
100-42-5	Styrene	0.07	0.07	0.30	1.49	0.30	0.012	U
75-25-2	Bromoform	0.02	0.02	0.17	0.87	0.17	0.007	U
95-47-6	o-Xylene	0.07	0.07	0.30	1.50	0.30	0.012	U
79-34-5	1,1,2,2-Tetrachloroethane	0.07	0.07	0.47	2.37	0.47	0.018	U
96-18-4	1,2,3-Trichloropropane	0.03	0.03	0.18	0.92	0.18	0.007	U
103-65-1	n-Propylbenzene	0.05	0.05	0.23	1.15	0.23	0.009	U
98-82-8	Isopropylbenzene	0.05	0.05	0.23	1.16	0.23	0.009	U
108-67-8	1,3,5-Trimethylbenzene	0.07	0.07	0.35	1.76	0.35	0.013	U
98-06-6	tert-butyl benzene	0.04	0.04	0.23	1.14	0.23	0.009	U
95-63-6	1,2,4-Trimethylbenzene	0.07	0.07	0.34	1.70	0.34	0.013	U
135-98-8	sec-butylbenzene	0.04	0.04	0.24	1.21	0.24	0.009	U
541-73-1	1,3-Dichlorobenzene	0.07	0.07	0.41	2.07	0.41	0.016	U
99-87-6	Isopropyltoluene	0.04	0.04	0.24	1.19	0.24	0.009	U
100-44-7	Benzyl chloride	0.08	0.08	0.41	4.12	0.41	0.016	U
106-46-7	1,4-Dichlorobenzene	0.13	0.13	0.83	8.29	0.83	0.032	U
104-51-8	n-Butylbenzene	0.08	0.08	0.45	4.45	0.45	0.017	U
95-50-1	1,2-Dichlorobenzene	0.13	0.13	0.81	8.13	0.81	0.031	U
96-12-8	1,2-Dibromo-3-chloropropane	0.22	0.22	2.19	8.76	2.19	0.084	U
120-82-1	1,2,4-Trichlorobenzene	0.13	0.13	1.03	10.34	1.03	0.040	U
87-68-3	Hexachlorobutadiene	0.13	0.13	1.49	14.86	1.49	0.057	U
Surrogate Recovery		Spike Amt. ppbV		Amount ppbV		QC Limits	Flag * = Out	
Toluene-d8		10.000		10.361		104	70-130	

Notes: 1) Reported results are to be Interpreted to two significant figures.

2) ug/m3 = ppbV\*FW/23 88 calculated assuming conditions at 60 F and 1 atm.

4) U and ND are Flags used for Not Detected

5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

**APPENDIX B**  
**BORING LOGS**

# EXPLORATION LOG STA-3C

PROJECT: BRC GAS SAMPLING

PROJECT NO.: 20102638V1

BORING LOCATION: HENDERSON, NEVADA

EXPLORATION DATE: 2/22/2010

EXPLORATION SIZE (dia.): 8" O.D. H.S AUGER

EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG

ELEVATION: EXISTING GROUND SURFACE

LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 38 FEET

DATE MEASURED: 2/22/2010

FINAL DEPTH TO WATER: N/A

DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (lsf)
0	7 13 30	SP	QUARTERNARY ALLUVIUM: Brown (10YR 4/3) poorly graded SAND, trace silt, trace fine gravel, dry and medium dense. 100% Sand (90% fine to medium sand, 10% coarse sand. Moderate reaction with hydrochloric acid.						
2	8 36 35	SW	Brown (7.5YR 4/3) well graded SAND with gravel, trace silt, dry and dense. 5% silt, 75% sand (60% fine to medium sand, 40% coarse sand), 20% fine gravel. Moderate reaction with hydrochloric acid.						
4	36 39 50/3	SM	Yellowish brown (10YR 5/4) silty SAND with gravel, dry and dense. 15% silt, 80% sand (60% fine to medium sand, 40% coarse sand), 5% fine gravel, dry and dense. Moderate reaction with hydrochloric acid.  ...approximately 20% fine to coarse gravel.						
6	34 50/2								
8	50/3								
10	11 50/4								
12		SM	Yellowish brown (10YR 5/4) silty SAND, dry and dense. 15% silt, 75% sand (50% fine sand, 30% medium sand, 20% coarse						

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made. It is not intended to be representative of subsurface conditions at other locations or times.

# EXPLORATION LOG STA-3C

PROJECT: BRC GAS SAMPLING  
 BORING LOCATION: HENDERSON, NEVADA  
 EXPLORATION SIZE (dia.): 8" O.D. H.S AUGER  
 ELEVATION: EXISTING GROUND SURFACE

PROJECT NO.: 20102638V1  
 EXPLORATION DATE: 2/22/2010  
 EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG  
 LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 38 FEET  
 FINAL DEPTH TO WATER: N/A

DATE MEASURED: 2/22/2010  
 DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (lsf)
-14			sand), 10% fine gravel. Strong reaction with hydrochloric acid.						
-16			...less than 5% gravel.						
-18			...dark yellowish brown (10YR 4/4).						
-20		SM	Dark yellowish brown (10YR 4/4) silty SAND, dry and medium dense. 25% silt, 70% sand (85% fine sand, 10% medium sand, 5% coarse sand), 5% fine gravel. Strong reaction with hydrochloric acid.						
-22			...20% silt, 10% fine gravel.						
-24									

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made.  
 It is not intended to be representative of subsurface conditions at other locations or times.

Figure No. I

# EXPLORATION LOG STA-3C

PROJECT: BRC GAS SAMPLING

PROJECT NO.: 20102638V1

BORING LOCATION: HENDERSON, NEVADA

EXPLORATION DATE: 2/22/2010

EXPLORATION SIZE (dia.): 8" O.D. H.S AUGER

EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG

ELEVATION: EXISTING GROUND SURFACE

LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 38 FEET

DATE MEASURED: 2/22/2010

FINAL DEPTH TO WATER: N/A

DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (lsf)
26			...15% silt, 70% sand (70% fine to medium sand, 30% coarse sand), 15% fine gravel.						
28									
30			...fine to coarse gravel.						
32			...30% silt, 70% fine sand.						
34	CL		Light grey (2.5YR 7/2) lean CLAY with fine sand, dry and firm. Gypsum crystals up to .25 inches long. Strong reaction with hydrochloric acid.						
36									
38	CL		MUDDY CREEK FORMATION: Brown (7.5YR 5/4) lean CLAY, trace gypsum, moist and stiff. Abundant gypsum as medium sand sized grains with crystals up						
	CL								

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made. It is not intended to be representative of subsurface conditions at other locations or times.

# EXPLORATION LOG STA-3C

PROJECT: BRC GAS SAMPLING

PROJECT NO.: 20102638V1

BORING LOCATION: HENDERSON, NEVADA

EXPLORATION DATE: 2/22/2010

EXPLORATION SIZE (dia.): 8" O.D. H.S AUGER

EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG

ELEVATION: EXISTING GROUND SURFACE

LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 38 FEET

DATE MEASURED: 2/22/2010

FINAL DEPTH TO WATER: N/A

DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (tsf)
40			to .25 inches long. Moderate reaction with hydrochloric acid. ...moist to wet.						
42			END OF BORING AT 40.0 FEET						
44									
46									
48									
50									

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made. It is not intended to be representative of subsurface conditions at other locations or times.

# EXPLORATION LOG STA-4C

PROJECT: BRC GAS SAMPLING

PROJECT NO.: 20102638V1

BORING LOCATION: HENDERSON, NEVADA

EXPLORATION DATE: 2/22/2010

EXPLORATION SIZE (dia.): 8" O.D. H.S. AUGER

EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG

ELEVATION: EXISTING GROUND SURFACE

LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 39 FEET

DATE MEASURED: 2/22/2010

FINAL DEPTH TO WATER: N/A

DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (lsf)
0		SM	Yellowish brown (10YR 5/4) silty SAND, dry and medium dense. 15% silt, 80% sand (65% fine sand, 25% medium sand, 10% coarse sand), 5% fine gravel. Strong reaction with hydrochloric acid.						
2									
4			...15% silt, 75% sand (65% fine sand, 20% medium sand, 15% coarse sand), 10% fine gravel, loose.						
6			...fine to coarse gravel. ...15% silt, 70% sand (70% fine sand, 20% medium sand, 10% coarse sand), 15% fine to coarse gravel, medium dense.						
8		SM	...pale brown (10YR 6/3) 20% silt, 75% sand (80% fine sand, 20% medium sand), 5% fine gravel, dense.						
10									
12			...15% silt, 70% sand (60% fine sand, 20% medium sand, 20% coarse sand), 15% fine to coarse gravel.						

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made. It is not intended to be representative of subsurface conditions at other locations or times.

# EXPLORATION LOG STA-4C

PROJECT: BRC GAS SAMPLING  
 BORING LOCATION: HENDERSON, NEVADA  
 EXPLORATION SIZE (dia.): 8" O.D. H.S. AUGER  
 ELEVATION: EXISTING GROUND SURFACE

PROJECT NO.: 20102638V1  
 EXPLORATION DATE: 2/22/2010  
 EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG  
 LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 39 FEET  
 FINAL DEPTH TO WATER: N/A

DATE MEASURED: 2/22/2010  
 DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (lsf)
-14									
-16									
-18		SM	...20% silt, 75% sand (45% fine sand, 30% medium sand, 25% coarse sand), 5% fine gravel.  ...yellowish brown (10YR 5/4).						
-20									
-22									
-24									

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made.  
 It is not intended to be representative of subsurface conditions at other locations or times.

# EXPLORATION LOG STA-4C

PROJECT: BRC GAS SAMPLING

PROJECT NO.: 20102638V1

BORING LOCATION: HENDERSON, NEVADA

EXPLORATION DATE: 2/22/2010

EXPLORATION SIZE (dia.): 8" O.D. H.S. AUGER

EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG

ELEVATION: EXISTING GROUND SURFACE

LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 39 FEET

DATE MEASURED: 2/22/2010

FINAL DEPTH TO WATER: N/A

DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (lsf)
26									
28		SM	...fine gravel.						
30			Light yellowish brown (10YR 6/4) clayey SAND, dry and dense. 60% sand (100% fine sand), 35% clay, 5% silt. Strong reaction with hydrochloric acid.						
32		CL	Light brown (7.5YR 6/4) lean CLAY, trace silt, trace fine sand, dry and soft. Approximately 5% gypsum crystals as fine to medium sand size grains up to .25 inches long. Strong reaction with hydrochloric acid.						
34									
36			...brown (7.5YR 5/4), moist and stiff. Approximately 10% gypsum crystals, trace weakly cemented nodules up to .5 inch diameter.						
38									

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made.  
It is not intended to be representative of subsurface conditions at other locations or times.

# EXPLORATION LOG STA-4C

PROJECT: BRC GAS SAMPLING

PROJECT NO.: 20102638V1

BORING LOCATION: HENDERSON, NEVADA

EXPLORATION DATE: 2/22/2010

EXPLORATION SIZE (dia.): 8" O.D. H.S. AUGER

EQUIPMENT: DIEDRICH D-50 TURBO TRACK RIG

ELEVATION: EXISTING GROUND SURFACE

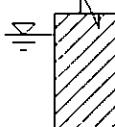
LOGGED BY: WIKTOR/FERRINGER

INITIAL DEPTH TO WATER: 39 FEET

DATE MEASURED: 2/22/2010

FINAL DEPTH TO WATER: N/A

DATE MEASURED: NA

ELEVATION/DEPTH	SOIL & SAMPLE SYMBOLS	USCS	DESCRIPTION	PI	LL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	SWELL (%)	POCKET PENETROMETER (tsf)
-40			...moist to wet.						
-42			END OF BORING AT 40.0 FEET						
-44									
-46									
-48									
-50									

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made.  
It is not intended to be representative of subsurface conditions at other locations or times.

# KEY TO SYMBOLS

## Symbol Description

### Strata symbols



Poorly graded sand



Well graded sand



Silty sand



Low plasticity  
clay

### Misc. Symbols



Boring continues



Water table at date  
indicated

### Soil Samplers



California sampler

### Notes:

1. Exploratory borings were drilled on 2/22/2010 using a 8-inch diameter continuous flight power auger.
2. Groundwater was encountered at approximately 38 to 39 feet below the ground surface at the time of drilling.
3. Borings were located using GPS coordinates provided by ERM.