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# National Grid – Grand Street Former MGP Site

# Data Usability Summary Report (DUSR)

ALBANY, NEW YORK

Volatile Analyses

SDG# H1C030562

Analyses Performed By:
Test America
Knoxville, Tennessee

Report: #13938R
Review Level: Tier III
Project: B0036639.0000.00013

## SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # H1C030562 for samples collected in association with the Grand Street Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

| Sample ID | Lab ID | Matrix | Sample Collection Date | Parent Sample | Analysis | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | VOC | SVOC | PCB | MET | MISC |
| VP-1 | H1C030562-001 | Air | 3/1/2011 | | X | | | | |
| VP-2 | H1C030562-002 | Air | 3/1/2011 | | X | | | | |
| VP-3 | H1C030562-003 | Air | 3/1/2011 | | X | | | | |
| VP-4 | H1C030562-004 | Air | 3/1/2011 | | X | | | | |
| DUP-030111 | H1C030562-005 | Air | 3/1/2011 | VP-2 | X | | | | |
| AMB-030111 | H1C030562-006 | Air | 3/1/2011 | | X | | | | |

**ANALYTICAL DATA PACKAGE DOCUMENTATION**
**GENERAL INFORMATION**

| Items Reviewed | Reported | | Performance Acceptable | | Not Required |
|---|---|---|---|---|---|
| | No | Yes | No | Yes | |
| Sample receipt condition | | X | | X | |
| Requested analyses and sample results | | X | | X | |
| Collection Technique (grab, composite, etc.) | | X | | X | |
| Methods of analysis | | X | | X | |
| Reporting limits | | X | | X | |
| Sample collection date | | X | | X | |
| Laboratory sample received date | | X | | X | |
| Sample preservation verification (as applicable) | | X | | X | |
| Sample preparation/extraction/analysis dates | | X | | X | |
| Fully executed Chain-of-Custody (COC) form completed | | X | | X | |
| Narrative summary of QA or sample problems provided | | X | | X | |
| Data Package Completeness and Compliance | | X | | X | |

QA - Quality Assurance

# INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) Method TO-15. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999, USEPA Region II SOP HW-31- Validating Air Samples Volatile Organic Analysis of Ambient Air In Canister by Method TO-15 of October 2006, New York State DEC Analytical Method ASP 2005 TO-15 (QA/QC Criteria R9 TO-15), NYSDEC Modifications to R9 TO-15 QA/QC Criteria February 2008 and NYSDEC Proposed Change to the ASP Regarding Canister Vacuum June 26, 2009.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

# VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

## 1. Holding Times

The specified holding times for the following methods are presented in the following table.

| Method | Matrix | Holding Time | Preservation |
|---|---|---|---|
| Method TO-15 | Air | 30 days storage from collection to analysis | Ambient temperature |

All samples were analyzed within the specified holding time criteria.

## 2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

## 3. Mass Spectrometer Tuning

Several sample locations were compliant with the Method TO-15 requirement of analysis within a 24-hour tune clock but not compliant with the NYSDEC requirement of analysis within a 12-hour tune clock. The data were not qualified.

System performance and column resolution were acceptable.

## 4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

### 4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (30%) and an RRF value greater than control limit (0.05).

### 4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (30%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

| Sample Locations | Initial or Continuing | Compound | Criteria |
|---|---|---|---|
| All samples within this SDG | IC %RSD | Carbon Tetrachloride | 31.9% |

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

| Initial / Continuing | Criteria | Sample Result | Qualification |
|---|---|---|---|
| Initial and Continuing Calibration | RRF < 0.05 | Non-detect | R |
| | | Detect | J |
| | RRF < 0.01[1] | Non-detect | R |
| | | Detect | J |
| | RRF > 0.05 or RRF > 0.01[1] | Non-detect | No Action |
| | | Detect | |
| Initial Calibration | %RSD > 30% | Non-detect | UJ |
| | | Detect | J |
| Continuing Calibration | %D > 30% (increase in sensitivity) | Non-detect | No Action |
| | | Detect | J |
| | %D > 30% (decrease in sensitivity) | Non-detect | UJ |
| | | Detect | J |

1 RRF of 0.01 only applies to compounds which are typically poor responding compounds (i.e., ketones, 1,4-dioxane, etc.)

Note: No sample results were qualified as rejected (R) due to the deviations listed above.

Note: The laboratory only performed a single-point initial calibration for the following compounds, utilizing a calibration point at the reporting limit:

Indene
Indane
2-Methylnaphthalene
Thiophene
1,2,3-Trimethylbenzene
1,2,4,5-Tetramethylbenzene
1,2,3,5-Tetramethylbenzene
1,2,3,4-Tetramethylbenzene

The above compounds were not detected above the reporting limits. (Units: µg/m[3)] in the samples therefore, data qualification is not warranted.

## 5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

## 6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than 40% or less than 40% of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

## 7. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the established acceptance limits of 70% to 130%. The relative percent difference (RPD) between the LCS recoveries must exhibit an RPD within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

## 8. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 100% for air matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for air matrices.

Results for duplicate samples are summarized in the following table.

| Sample ID/Duplicate ID | Compound | Sample Result | Duplicate Result | RPD |
|---|---|---|---|---|
| VP-2/DUP-03011 | 1,1,1-Trichloroethane | 1.6 | 1.6 | AC |
| | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.67 J | 0.61 J | |
| | 2-Butanone (MEK) | 2.9 U | 0.84 J | |
| | Acetone | 12 U | 3.7 J | |
| | Benzene | 0.2 J | 0.64 U | |
| | Carbon disulfide | 0.18 | 0.16 | |
| | Carbon tetrachloride | 1.1 J | 0.98 J | |
| | Chlorobenzene | 0.51 J | 0.92 J | |
| | Chloroform | 4.5 | 4.5 | |
| | Cyclohexane | 0.81 J | 0.74 J | |

| Sample ID/Duplicate ID | Compound | Sample Result | Duplicate Result | RPD |
|---|---|---|---|---|
| | Dichlorodifluoromethane | 3.0 | 3.0 | |
| | Isopropyl alcohol | 0.31 J | 0.7 J | |
| | Methylene chloride | 0.97 J | 0.95 J | |
| | m-Xylene & p-Xylene | 0.14 J | 0.15 J | |
| | Naphthalene | 2.6 U | 0.49 J | |
| | n-Butane | 0.98 | 1.2 | |
| | n-Decane | 0.96 J | 0.83 J | |
| | n-Heptane | 0.28 J | 0.32 J | |
| | n-Hexane | 0.38 J | 0.45 J | |
| | n-Octane | 0.21 J | 0.24 J | |
| | n-Undecane | 0.54 J | 6.4 J | |
| | o-Xylene | 0.33 J | 0.32 J | |
| | Pentane | 0.57 J | 0.83 J | |
| | tert-Butyl alcohol | 0.14 J | 0.23 J | |
| | Tetrachloroethene | 2.7 | 3.5 | |
| | Toluene | 0.93 | 0.98 | |
| | Trichloroethene | 2.1 | 0.76 J | |
| | Trichlorofluoromethane | 1.7 | 1.8 | |

U = Not detected.
AC = Acceptable.
NC = Not compliant.

The calculated RPDs between the parent sample and field duplicate were acceptable.

## 9. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

Tentative Identified Compounds (TICs) were detected in all samples associated with this SDG.

## 10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

## DATA VALIDATION CHECKLIST FOR VOCs

| VOCs: TO-15 | Reported | | Performance Acceptable | | Not Required |
|---|---|---|---|---|---|
| | No | Yes | No | Yes | |
| GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) | | | | | |
| **Tier II Validation** | | | | | |
| Canister return pressure/vacuum (>1"Hg) | | X | | X | |
| Holding times | | X | | X | |
| Reporting limits (units) | | X | | X | |
| Blanks | | | | | |
| A. Method blanks | | X | | X | |
| B. Equipment blanks | | X | | X | |
| C. Trip blanks | | | | | X |
| Laboratory Control Sample (LCS) | | X | | X | |
| Laboratory Control Sample Duplicate(LCSD) | | | | | X |
| LCS/LCSD Precision (RPD) | | | | | X |
| Matrix Spike (MS) | | | | | X |
| Matrix Spike Duplicate(MSD) | | | | | X |
| MS/MSD Precision (RPD) | | | | | X |
| Field/Lab Duplicate (%D) | | X | | X | |
| Surrogate Spike Recoveries | | X | | X | |
| Dilution Factor | | X | | X | |
| Moisture Content | | | | | X |
| **Tier III Validation** | | | | | |
| System performance and column resolution | | X | | X | |
| Initial calibration %RSDs | | X | X | | |
| Continuing calibration RRFs | | X | | X | |
| Continuing calibration %Ds | | X | | X | |
| Instrument tune and performance check | | X | | X | |
| Ion abundance criteria for each instrument used | | X | | X | |
| Internal standard | | X | | X | |
| Compound identification and quantitation | | | | | |
| A. Reconstructed ion chromatograms | | X | | X | |
| B. Quantitation Reports | | X | | X | |

| VOCs: TO-15 | Reported | | Performance Acceptable | | Not Required |
|---|---|---|---|---|---|
| | No | Yes | No | Yes | |
| GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) | | | | | |
| C. RT of sample compounds within the established RT windows | | X | | X | |
| D. Transcription/calculation errors present | | | | X | |
| E. Reporting limits adjusted to reflect sample dilutions | | X | | X | |

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

## SAMPLE COMPLIANCE REPORT

| Sample Delivery Group (SDG) | Sampling Date | Protocol | Sample ID | Matrix | Compliancy[1] | | | | | Noncompliance |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | VOC | SVOC | PCB/PEST /HERB | MET | MISC | |
| H1C030562-001 | 03/01/2011 | TO-15 | VP-1 | Air | No | -- | -- | -- | -- | ICAL %RSDs |
| H1C030562-002 | 03/01/2011 | TO-15 | VP-2 | Air | No | -- | -- | -- | -- | ICAL %RSDs |
| H1C030562-003 | 03/01/2011 | TO-15 | VP-3 | Air | No | -- | -- | -- | -- | ICAL %RSDs |
| H1C030562-004 | 03/01/2011 | TO-15 | VP-4 | Air | No | -- | -- | -- | -- | ICAL %RSDs |
| H1C030562-005 | 03/01/2011 | TO-15 | DUP-030111 | Air | No | -- | -- | -- | -- | ICAL %RSDs |
| H1C030562-006 | 03/01/2011 | TO-15 | AMB-030111 | Air | No | -- | -- | -- | -- | ICAL %RSDs |

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable

VALIDATION PERFORMED BY: Mary Ann Doyle

SIGNATURE: 

DATE: April 5, 2011

PEER REVIEW BY: Dennis Capria

DATE: April 21, 2011

## CORRECTED SAMPLE ANALYSIS DATA SHEETS AND COCs

13938R

ARCADIS U.S., Inc.

Client Sample ID: VP-1

GC/MS Volatiles

Lot-Sample # H1C030562 - 001 Work Order # ME6C11AA Matrix.....: AIR

Date Sampled...: 03/01/2011 Date Received..: 03/03/2011
Prep Date.....: 03/11/2011 Analysis Date... 03/11/2011
Prep Batch #.....: 1070220
Dilution Factor.: 1 Method.....: TO-15

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | ND | 0.20 | ND | | 1.4 |
| **Acetone** | **4.8** | **5.0** | **11** | **J** | **12** |
| 1,4-Dioxane | ND | 0.50 | ND | | 1.8 |
| Ethanol | ND | 2.0 | ND | | 3.8 |
| **Ethylbenzene** | **0.10** | **0.20** | **0.45** | **J** | **0.87** |
| **Trichlorofluoromethane** | **0.55** | **0.20** | **3.1** | | **1.1** |
| **n-Heptane** | **0.17** | **0.50** | **0.71** | **J** | **2.0** |
| Hexachlorobutadiene | ND | 1.0 | ND | | 11 |
| **n-Hexane** | **0.12** | **0.50** | **0.43** | **J** | **1.8** |
| **2-Hexanone** | **0.11** | **0.50** | **0.45** | **J** | **2.0** |
| **2,2,4-Trimethylpentane** | **0.093** | **0.50** | **0.44** | **J** | **2.3** |
| **Isopropyl alcohol** | **0.54** | **2.0** | **1.3** | **J** | **4.9** |
| **tert-Butyl alcohol** | **0.17** | **2.0** | **0.52** | **J** | **6.1** |
| **Methylene chloride** | **0.36** | **0.50** | **1.3** | **J** | **1.7** |
| 2-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Naphthalene | ND | 0.50 | ND | | 2.6 |
| **Benzene** | **0.22** | **0.20** | **0.70** | | **0.64** |
| **n-Octane** | **0.080** | **0.40** | **0.37** | **J** | **1.9** |
| Pentane | ND | 1.0 | ND | | 3.0 |
| Benzyl chloride | ND | 0.40 | ND | | 2.1 |
| Styrene | ND | 0.20 | ND | | 0.85 |
| 1,1,2,2-Tetrachloroethane | ND | 0.20 | ND | | 1.4 |
| **Tetrachloroethene** | **0.68** | **0.20** | **4.6** | | **1.4** |
| **Toluene** | **0.64** | **0.20** | **2.4** | | **0.75** |
| 1,2,4-Trichlorobenzene | ND | 1.0 | ND | | 7.4 |
| **1,1,1-Trichloroethane** | **0.14** | **0.20** | **0.75** | **J** | **1.1** |
| 1,1,2-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| **Trichloroethene** | **3.1** | **0.20** | **16** | | **1.1** |
| **1,1,2-Trichloro-1,2,2-trifluoroethane** | **0.17** | **0.20** | **1.3** | **J** | **1.5** |
| **1,2,4-Trimethylbenzene** | **0.25** | **0.20** | **1.2** | | **0.98** |
| **1,3,5-Trimethylbenzene** | **0.083** | **0.20** | **0.41** | **J** | **0.98** |
| Vinyl chloride | ND | 0.20 | ND | | 0.51 |
| **o-Xylene** | **0.13** | **0.20** | **0.55** | **J** | **0.87** |
| 1-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Methyl tert-butyl ether | ND | 1.0 | ND | | 3.6 |
| **n-Decane** | **0.32** | **1.0** | **1.9** | **J** | **5.8** |
| n-Dodecane | ND | 1.0 | ND | | 7.0 |
| **n-Undecane** | **0.21** | **1.0** | **1.4** | **J** | **6.4** |

ARCADIS U.S., Inc.

Client Sample ID: VP-1

GC/MS Volatiles

Lot-Sample # H1C030562 - 001 Work Order # ME6C11AA Matrix.....: AIR

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| **Nonane** | **0.11** | **0.50** | **0.57** | **J** | **2.6** |
| **m-Xylene & p-Xylene** | **0.40** | **0.20** | **1.8** | | **0.87** |
| Bromodichloromethane | ND | 0.20 | ND | | 1.3 |
| 1,2-Dibromoethane (EDB) | ND | 0.20 | ND | | 1.5 |
| **2-Butanone (MEK)** | **0.79** | **1.0** | **2.3** | **J** | **2.9** |
| **4-Methyl-2-pentanone (MIBK)** | **0.059** | **0.50** | **0.24** | **J** | **2.0** |
| Vinyl bromide | ND | 0.20 | ND | | 0.87 |
| **n-Butane** | **0.23** | **0.40** | **0.55** | **J** | **0.95** |
| Bromoform | ND | 0.20 | ND | | 2.1 |
| Bromomethane | ND | 0.20 | ND | | 0.78 |
| Indene | ND | 0.40 | ND | | 1.9 |
| 1,3-Butadiene | ND | 0.40 | ND | | 0.88 |
| 4-Ethyltoluene | ND | 0.40 | ND | | 2.0 |
| Thiophene | ND | 0.20 | ND | | 0.69 |
| **Carbon disulfide** | **0.31** | **0.50** | **0.97** | **J** | **1.6** |
| **Carbon tetrachloride** | **0.15** J | **0.20** | **0.94** | **J** | **1.3** |
| **Chlorobenzene** | **0.59** | **0.20** | **2.7** | | **0.92** |
| 1,2,3-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| Dibromochloromethane | ND | 0.20 | ND | | 1.7 |
| Chloroethane | ND | 0.20 | ND | | 0.53 |
| **Chloroform** | **0.12** | **0.20** | **0.59** | **J** | **0.98** |
| Chloromethane | ND | 0.50 | ND | | 1.0 |
| 3-Chloropropene | ND | 0.20 | ND | | 0.63 |
| 1,2,4,5-Tetramethylbenzene | ND | 0.20 | ND | | 1.1 |
| Indane | ND | 0.20 | ND | | 0.97 |
| 2-Chlorotoluene | ND | 0.40 | ND | | 2.1 |
| 1,2,3,4-Tetramethylbenzene | ND | 0.22 | ND | | 1.2 |
| 1,2,3,5-Tetramethylbenzene | ND | 0.20 | ND | | 1.1 |
| **Cyclohexane** | **0.067** | **0.50** | **0.23** | **J** | **1.7** |
| **1,2-Dichlorobenzene** | **0.49** | **0.20** | **2.9** | | **1.2** |
| 1,3-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| **1,4-Dichlorobenzene** | **0.24** | **0.20** | **1.4** | | **1.2** |
| **Dichlorodifluoromethane** | **0.62** | **0.20** | **3.0** | | **0.99** |
| 1,1-Dichloroethane | ND | 0.20 | ND | | 0.81 |
| 1,2-Dichloroethane | ND | 0.20 | ND | | 0.81 |
| 1,1-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| **cis-1,2-Dichloroethene** | **0.19** | **0.20** | **0.74** | **J** | **0.79** |
| trans-1,2-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| 1,2-Dichloropropane | ND | 0.20 | ND | | 0.92 |
| cis-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Ethane, 1,1-difluoro- | 2.2 | ppb(v/v) |

ARCADIS U.S., Inc.

Client Sample ID: VP-1

GC/MS Volatiles

**Lot-Sample #** H1C030562 - 001 **Work Order #** ME6C11AA **Matrix.....:** AIR

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 1.2 | ppb(v/v) |
| Unknown | 3.4 | ppb(v/v) |
| Unknown | 3.3 | ppb(v/v) |
| Unknown | 2.3 | ppb(v/v) |
| Unknown | 1.6 | ppb(v/v) |

| SURROGATE | PERCENT RECOVERY | LABORATORY CONTROL LIMITS (%) |
|---|---|---|
| 4-Bromofluorobenzene | 98 | 60 - 140 |

Qualifiers

J Estimated result. Result is less than RL.

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ARCADIS U.S., Inc.

Client Sample ID: VP-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #** | H1C030562 - 002 | **Work Order #** | ME6C81AA | **Matrix.....:** | AIR |
| **Date Sampled...:** | 03/01/2011 | **Date Received..:** | 03/03/2011 | | |
| **Prep Date.....:** | 03/11/2011 | **Analysis Date...** | 03/11/2011 | | |
| **Prep Batch #.....:** | 1070220 | | | | |
| **Dilution Factor.:** | 1 | **Method.....:** | TO-15 | | |

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | ND | 0.20 | ND | | 1.4 |
| Acetone | ND | 5.0 | ND | | 12 |
| 1,4-Dioxane | ND | 0.50 | ND | | 1.8 |
| Ethanol | ND | 2.0 | ND | | 3.8 |
| Ethylbenzene | ND | 0.20 | ND | | 0.87 |
| **Trichlorofluoromethane** | **0.31** | **0.20** | **1.7** | | **1.1** |
| **n-Heptane** | **0.069** | **0.50** | **0.28** | **J** | **2.0** |
| Hexachlorobutadiene | ND | 1.0 | ND | | 11 |
| **n-Hexane** | **0.11** | **0.50** | **0.38** | **J** | **1.8** |
| 2-Hexanone | ND | 0.50 | ND | | 2.0 |
| 2,2,4-Trimethylpentane | ND | 0.50 | ND | | 2.3 |
| **Isopropyl alcohol** | **0.13** | **2.0** | **0.31** | **J** | **4.9** |
| **tert-Butyl alcohol** | **0.045** | **2.0** | **0.14** | **J** | **6.1** |
| **Methylene chloride** | **0.28** | **0.50** | **0.97** | **J** | **1.7** |
| 2-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Naphthalene | ND | 0.50 | ND | | 2.6 |
| **Benzene** | **0.062** | **0.20** | **0.20** | **J** | **0.64** |
| **n-Octane** | **0.044** | **0.40** | **0.21** | **J** | **1.9** |
| **Pentane** | **0.19** | **1.0** | **0.57** | **J** | **3.0** |
| Benzyl chloride | ND | 0.40 | ND | | 2.1 |
| Styrene | ND | 0.20 | ND | | 0.85 |
| 1,1,2,2-Tetrachloroethane | ND | 0.20 | ND | | 1.4 |
| **Tetrachloroethene** | **0.39** | **0.20** | **2.7** | | **1.4** |
| **Toluene** | **0.25** | **0.20** | **0.93** | | **0.75** |
| 1,2,4-Trichlorobenzene | ND | 1.0 | ND | | 7.4 |
| **1,1,1-Trichloroethane** | **0.30** | **0.20** | **1.6** | | **1.1** |
| 1,1,2-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| **Trichloroethene** | **0.38** | **0.20** | **2.1** | | **1.1** |
| **1,1,2-Trichloro-1,2,2-trifluoroethane** | **0.088** | **0.20** | **0.67** | **J** | **1.5** |
| 1,2,4-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| 1,3,5-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| Vinyl chloride | ND | 0.20 | ND | | 0.51 |
| **o-Xylene** | **0.076** | **0.20** | **0.33** | **J** | **0.87** |
| 1-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Methyl tert-butyl ether | ND | 1.0 | ND | | 3.6 |
| **n-Decane** | **0.16** | **1.0** | **0.96** | **J** | **5.8** |
| n-Dodecane | ND | 1.0 | ND | | 7.0 |
| **n-Undecane** | **0.084** | **1.0** | **0.54** | **J** | **6.4** |

ARCADIS U.S., Inc.

Client Sample ID: VP-2

GC/MS Volatiles

Lot-Sample # H1C030562 - 002 Work Order # ME6C81AA Matrix.....: AIR

| PARAMETER | RESULTS (ppb(v/v)) | | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|---|
| Nonane | ND | | 0.50 | ND | | 2.6 |
| **m-Xylene & p-Xylene** | **0.14** | | **0.20** | **0.62** | **J** | **0.87** |
| Bromodichloromethane | ND | | 0.20 | ND | | 1.3 |
| 1,2-Dibromoethane (EDB) | ND | | 0.20 | ND | | 1.5 |
| 2-Butanone (MEK) | ND | | 1.0 | ND | | 2.9 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | ND | | 2.0 |
| Vinyl bromide | ND | | 0.20 | ND | | 0.87 |
| **n-Butane** | **0.41** | | **0.40** | **0.98** | | **0.95** |
| Bromoform | ND | | 0.20 | ND | | 2.1 |
| Bromomethane | ND | | 0.20 | ND | | 0.78 |
| Indene | ND | | 0.40 | ND | | 1.9 |
| 1,3-Butadiene | ND | | 0.40 | ND | | 0.88 |
| 4-Ethyltoluene | ND | | 0.40 | ND | | 2.0 |
| Thiophene | ND | | 0.20 | ND | | 0.69 |
| **Carbon disulfide** | **0.058** | | **0.50** | **0.18** | **J** | **1.6** |
| **Carbon tetrachloride** | **0.18** | J | **0.20** | **1.1** | **J** | **1.3** |
| **Chlorobenzene** | **0.11** | | **0.20** | **0.51** | **J** | **0.92** |
| 1,2,3-Trimethylbenzene | ND | | 0.20 | ND | | 0.98 |
| Dibromochloromethane | ND | | 0.20 | ND | | 1.7 |
| Chloroethane | ND | | 0.20 | ND | | 0.53 |
| **Chloroform** | **0.93** | | **0.20** | **4.5** | | **0.98** |
| Chloromethane | ND | | 0.50 | ND | | 1.0 |
| 3-Chloropropene | ND | | 0.20 | ND | | 0.63 |
| 1,2,4,5-Tetramethylbenzene | ND | | 0.20 | ND | | 1.1 |
| Indane | ND | | 0.20 | ND | | 0.97 |
| 2-Chlorotoluene | ND | | 0.40 | ND | | 2.1 |
| 1,2,3,4-Tetramethylbenzene | ND | | 0.22 | ND | | 1.2 |
| 1,2,3,5-Tetramethylbenzene | ND | | 0.20 | ND | | 1.1 |
| **Cyclohexane** | **0.24** | | **0.50** | **0.81** | **J** | **1.7** |
| 1,2-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| 1,3-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| 1,4-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| **Dichlorodifluoromethane** | **0.61** | | **0.20** | **3.0** | | **0.99** |
| 1,1-Dichloroethane | ND | | 0.20 | ND | | 0.81 |
| 1,2-Dichloroethane | ND | | 0.20 | ND | | 0.81 |
| 1,1-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| cis-1,2-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| trans-1,2-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| 1,2-Dichloropropane | ND | | 0.20 | ND | | 0.92 |
| cis-1,3-Dichloropropene | ND | | 0.20 | ND | | 0.91 |

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 2.5 | ppb(v/v) |

ARCADIS U.S., Inc.

Client Sample ID: VP-2

GC/MS Volatiles

Lot-Sample # H1C030562 - 002 Work Order # ME6C81AA Matrix.....: AIR

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 160 | ppb(v/v) |
| Unknown | 1.0 | ppb(v/v) |
| Unknown | 1.3 | ppb(v/v) |
| Unknown | 1.3 | ppb(v/v) |

| SURROGATE | PERCENT RECOVERY | LABORATORY CONTROL LIMITS (%) |
|---|---|---|
| 4-Bromofluorobenzene | 97 | 60 - 140 |

Qualifiers

J Estimated result. Result is less than RL.

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ARCADIS U.S., Inc.

Client Sample ID: VP-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #** | H1C030562 - 003 | **Work Order #** | ME6DC1AA | **Matrix.....:** | AIR |
| **Date Sampled...:** | 03/01/2011 | **Date Received..:** | 03/03/2011 | | |
| **Prep Date.....:** | 03/11/2011 | **Analysis Date...** | 03/11/2011 | | |
| **Prep Batch #.....:** | 1070220 | | | | |
| **Dilution Factor.:** | 1 | **Method.....:** | TO-15 | | |

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | ND | 0.20 | ND | | 1.4 |
| **Acetone** | **9.3** | **5.0** | **22** | | **12** |
| 1,4-Dioxane | ND | 0.50 | ND | | 1.8 |
| **Ethanol** | **2.6** | **2.0** | **5.0** | | **3.8** |
| **Ethylbenzene** | **0.20** | **0.20** | **0.86** | | **0.87** |
| **Trichlorofluoromethane** | **0.50** | **0.20** | **2.8** | | **1.1** |
| **n-Heptane** | **0.29** | **0.50** | **1.2** | J | **2.0** |
| Hexachlorobutadiene | ND | 1.0 | ND | | 11 |
| **n-Hexane** | **0.47** | **0.50** | **1.7** | J | **1.8** |
| **2-Hexanone** | **0.21** | **0.50** | **0.86** | J | **2.0** |
| **2,2,4-Trimethylpentane** | **0.14** | **0.50** | **0.64** | J | **2.3** |
| **Isopropyl alcohol** | **1.6** | **2.0** | **3.9** | J | **4.9** |
| **tert-Butyl alcohol** | **0.21** | **2.0** | **0.65** | J | **6.1** |
| **Methylene chloride** | **1.0** | **0.50** | **3.5** | | **1.7** |
| 2-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Naphthalene | ND | 0.50 | ND | | 2.6 |
| **Benzene** | **0.31** | **0.20** | **0.99** | | **0.64** |
| **n-Octane** | **0.12** | **0.40** | **0.56** | J | **1.9** |
| **Pentane** | **1.4** | **1.0** | **4.0** | | **3.0** |
| Benzyl chloride | ND | 0.40 | ND | | 2.1 |
| **Styrene** | **0.065** | **0.20** | **0.28** | J | **0.85** |
| 1,1,2,2-Tetrachloroethane | ND | 0.20 | ND | | 1.4 |
| **Tetrachloroethene** | **0.11** | **0.20** | **0.73** | J | **1.4** |
| **Toluene** | **1.4** | **0.20** | **5.1** | | **0.75** |
| 1,2,4-Trichlorobenzene | ND | 1.0 | ND | | 7.4 |
| **1,1,1-Trichloroethane** | **0.070** | **0.20** | **0.38** | J | **1.1** |
| 1,1,2-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| **Trichloroethene** | **0.26** | **0.20** | **1.4** | | **1.1** |
| **1,1,2-Trichloro-1,2,2-trifluoroethane** | **0.082** | **0.20** | **0.63** | J | **1.5** |
| **1,2,4-Trimethylbenzene** | **0.28** | **0.20** | **1.4** | | **0.98** |
| **1,3,5-Trimethylbenzene** | **0.11** | **0.20** | **0.52** | J | **0.98** |
| Vinyl chloride | ND | 0.20 | ND | | 0.51 |
| **o-Xylene** | **0.22** | **0.20** | **0.95** | | **0.87** |
| 1-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Methyl tert-butyl ether | ND | 1.0 | ND | | 3.6 |
| **n-Decane** | **0.31** | **1.0** | **1.8** | J | **5.8** |
| n-Dodecane | ND | 1.0 | ND | | 7.0 |
| **n-Undecane** | **0.18** | **1.0** | **1.2** | J | **6.4** |

ARCADIS U.S., Inc.

Client Sample ID: VP-3

GC/MS Volatiles

Lot-Sample # H1C030562 - 003 Work Order # ME6DC1AA Matrix.....: AIR

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| **Nonane** | **0.17** | **0.50** | **0.87** | **J** | **2.6** |
| **m-Xylene & p-Xylene** | **0.71** | **0.20** | **3.1** | | **0.87** |
| Bromodichloromethane | ND | 0.20 | ND | | 1.3 |
| 1,2-Dibromoethane (EDB) | ND | 0.20 | ND | | 1.5 |
| **2-Butanone (MEK)** | **1.2** | **1.0** | **3.7** | | **2.9** |
| **4-Methyl-2-pentanone (MIBK)** | **0.082** | **0.50** | **0.34** | **J** | **2.0** |
| Vinyl bromide | ND | 0.20 | ND | | 0.87 |
| **n-Butane** | **7.3** | **0.40** | **17** | | **0.95** |
| Bromoform | ND | 0.20 | ND | | 2.1 |
| Bromomethane | ND | 0.20 | ND | | 0.78 |
| Indene | ND | 0.40 | ND | | 1.9 |
| 1,3-Butadiene | ND | 0.40 | ND | | 0.88 |
| **4-Ethyltoluene** | **0.080** | **0.40** | **0.39** | **J** | **2.0** |
| Thiophene | ND | 0.20 | ND | | 0.69 |
| **Carbon disulfide** | **0.19** | **0.50** | **0.60** | **J** | **1.6** |
| **Carbon tetrachloride** | **0.66** | **0.20** | **4.1** | | **1.3** |
| **Chlorobenzene** | **0.072** | **0.20** | **0.33** | **J** | **0.92** |
| 1,2,3-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| Dibromochloromethane | ND | 0.20 | ND | | 1.7 |
| Chloroethane | ND | 0.20 | ND | | 0.53 |
| **Chloroform** | **2.0** | **0.20** | **9.7** | | **0.98** |
| **Chloromethane** | **0.41** | **0.50** | **0.85** | **J** | **1.0** |
| 3-Chloropropene | ND | 0.20 | ND | | 0.63 |
| 1,2,4,5-Tetramethylbenzene | ND | 0.20 | ND | | 1.1 |
| Indane | ND | 0.20 | ND | | 0.97 |
| 2-Chlorotoluene | ND | 0.40 | ND | | 2.1 |
| 1,2,3,4-Tetramethylbenzene | ND | 0.22 | ND | | 1.2 |
| 1,2,3,5-Tetramethylbenzene | ND | 0.20 | ND | | 1.1 |
| **Cyclohexane** | **0.47** | **0.50** | **1.6** | **J** | **1.7** |
| 1,2-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| 1,3-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| 1,4-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| **Dichlorodifluoromethane** | **0.61** | **0.20** | **3.0** | | **0.99** |
| 1,1-Dichloroethane | ND | 0.20 | ND | | 0.81 |
| 1,2-Dichloroethane | ND | 0.20 | ND | | 0.81 |
| 1,1-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| cis-1,2-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| trans-1,2-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| 1,2-Dichloropropane | ND | 0.20 | ND | | 0.92 |
| cis-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Butane, 2-methyl- | 1.9 | ppb(v/v) |

ARCADIS U.S., Inc.

Client Sample ID: VP-3

GC/MS Volatiles

Lot-Sample # H1C030562 - 003 Work Order # ME6DC1AA Matrix.....: AIR

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Ethane, 1,1-difluoro- | 4.1 | ppb(v/v) |
| Unknown | 3.8 | ppb(v/v) |
| Unknown | 1.6 | ppb(v/v) |
| Unknown | 4.0 | ppb(v/v) |
| Unknown | 5.0 | ppb(v/v) |
| Unknown | 1.2 | ppb(v/v) |
| 1R-.alpha.-Pinene | 1.3 | ppb(v/v) |

| SURROGATE | PERCENT RECOVERY | LABORATORY CONTROL LIMITS (%) |
|---|---|---|
| 4-Bromofluorobenzene | 98 | 60 - 140 |

Qualifiers

J Estimated result. Result is less than RL.

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ARCADIS U.S., Inc.

Client Sample ID: VP-4

GC/MS Volatiles

Lot-Sample # H1C030562 - 004 Work Order # ME6DF1AA Matrix.....: AIR

Date Sampled...: 03/01/2011 Date Received..: 03/03/2011
Prep Date.....: 03/11/2011 Analysis Date... 03/11/2011
Prep Batch #....: 1070220
Dilution Factor.: 1 Method.....: TO-15

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | ND | 0.20 | ND | | 1.4 |
| Acetone | 7.8 | 5.0 | 19 | | 12 |
| 1,4-Dioxane | ND | 0.50 | ND | | 1.8 |
| Ethanol | 4.5 | 2.0 | 8.5 | | 3.8 |
| Ethylbenzene | 0.11 | 0.20 | 0.49 | J | 0.87 |
| Trichlorofluoromethane | 0.47 | 0.20 | 2.7 | | 1.1 |
| n-Heptane | 0.090 | 0.50 | 0.37 | J | 2.0 |
| Hexachlorobutadiene | ND | 1.0 | ND | | 11 |
| n-Hexane | 0.23 | 0.50 | 0.82 | J | 1.8 |
| 2-Hexanone | 0.092 | 0.50 | 0.38 | J | 2.0 |
| 2,2,4-Trimethylpentane | 0.085 | 0.50 | 0.40 | J | 2.3 |
| Isopropyl alcohol | 0.96 | 2.0 | 2.4 | J | 4.9 |
| tert-Butyl alcohol | 0.11 | 2.0 | 0.35 | J | 6.1 |
| Methylene chloride | 2.3 | 0.50 | 8.1 | | 1.7 |
| 2-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Naphthalene | 0.10 | 0.50 | 0.55 | J | 2.6 |
| Benzene | 0.16 | 0.20 | 0.50 | J | 0.64 |
| n-Octane | 0.057 | 0.40 | 0.27 | J | 1.9 |
| Pentane | 0.62 | 1.0 | 1.8 | J | 3.0 |
| Benzyl chloride | ND | 0.40 | ND | | 2.1 |
| Styrene | ND | 0.20 | ND | | 0.85 |
| 1,1,2,2-Tetrachloroethane | ND | 0.20 | ND | | 1.4 |
| Tetrachloroethene | 0.51 | 0.20 | 3.5 | | 1.4 |
| Toluene | 0.55 | 0.20 | 2.1 | | 0.75 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | ND | | 7.4 |
| 1,1,1-Trichloroethane | 0.15 | 0.20 | 0.80 | J | 1.1 |
| 1,1,2-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| Trichloroethene | 0.18 | 0.20 | 0.94 | J | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.083 | 0.20 | 0.63 | J | 1.5 |
| 1,2,4-Trimethylbenzene | 0.24 | 0.20 | 1.2 | | 0.98 |
| 1,3,5-Trimethylbenzene | 0.071 | 0.20 | 0.35 | J | 0.98 |
| Vinyl chloride | ND | 0.20 | ND | | 0.51 |
| o-Xylene | 0.16 | 0.20 | 0.67 | J | 0.87 |
| 1-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Methyl tert-butyl ether | ND | 1.0 | ND | | 3.6 |
| n-Decane | 0.31 | 1.0 | 1.8 | J | 5.8 |
| n-Dodecane | 0.12 | 1.0 | 0.81 | J | 7.0 |
| n-Undecane | 0.25 | 1.0 | 1.6 | J | 6.4 |

ARCADIS U.S., Inc.

Client Sample ID: VP-4

GC/MS Volatiles

Lot-Sample # H1C030562 - 004 Work Order # ME6DF1AA Matrix.....: AIR

| PARAMETER | RESULTS (ppb(v/v)) | | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|---|
| Nonane | ND | | 0.50 | ND | | 2.6 |
| **m-Xylene & p-Xylene** | **0.44** | | **0.20** | **1.9** | | **0.87** |
| Bromodichloromethane | ND | | 0.20 | ND | | 1.3 |
| 1,2-Dibromoethane (EDB) | ND | | 0.20 | ND | | 1.5 |
| **2-Butanone (MEK)** | **0.77** | | **1.0** | **2.3** | **J** | **2.9** |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | ND | | 2.0 |
| Vinyl bromide | ND | | 0.20 | ND | | 0.87 |
| **n-Butane** | **2.3** | | **0.40** | **5.6** | | **0.95** |
| Bromoform | ND | | 0.20 | ND | | 2.1 |
| Bromomethane | ND | | 0.20 | ND | | 0.78 |
| Indene | ND | | 0.40 | ND | | 1.9 |
| 1,3-Butadiene | ND | | 0.40 | ND | | 0.88 |
| 4-Ethyltoluene | ND | | 0.40 | ND | | 2.0 |
| Thiophene | ND | | 0.20 | ND | | 0.69 |
| **Carbon disulfide** | **0.44** | | **0.50** | **1.4** | **J** | **1.6** |
| **Carbon tetrachloride** | **0.063** | **J** | **0.20** | **0.40** | **J** | **1.3** |
| **Chlorobenzene** | **0.058** | | **0.20** | **0.27** | **J** | **0.92** |
| 1,2,3-Trimethylbenzene | ND | | 0.20 | ND | | 0.98 |
| Dibromochloromethane | ND | | 0.20 | ND | | 1.7 |
| Chloroethane | ND | | 0.20 | ND | | 0.53 |
| **Chloroform** | **0.46** | | **0.20** | **2.2** | | **0.98** |
| Chloromethane | ND | | 0.50 | ND | | 1.0 |
| 3-Chloropropene | ND | | 0.20 | ND | | 0.63 |
| 1,2,4,5-Tetramethylbenzene | ND | | 0.20 | ND | | 1.1 |
| Indane | ND | | 0.20 | ND | | 0.97 |
| 2-Chlorotoluene | ND | | 0.40 | ND | | 2.1 |
| 1,2,3,4-Tetramethylbenzene | ND | | 0.22 | ND | | 1.2 |
| 1,2,3,5-Tetramethylbenzene | ND | | 0.20 | ND | | 1.1 |
| **Cyclohexane** | **0.14** | | **0.50** | **0.48** | **J** | **1.7** |
| 1,2-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| 1,3-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| 1,4-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| **Dichlorodifluoromethane** | **0.66** | | **0.20** | **3.3** | | **0.99** |
| 1,1-Dichloroethane | ND | | 0.20 | ND | | 0.81 |
| 1,2-Dichloroethane | ND | | 0.20 | ND | | 0.81 |
| 1,1-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| cis-1,2-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| trans-1,2-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| 1,2-Dichloropropane | ND | | 0.20 | ND | | 0.92 |
| cis-1,3-Dichloropropene | ND | | 0.20 | ND | | 0.91 |

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 2.3 | ppb(v/v) |

ARCADIS U.S., Inc.

Client Sample ID: VP-4

GC/MS Volatiles

Lot-Sample # H1C030562 - 004 Work Order # ME6DF1AA Matrix.....: AIR

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 1.4 | ppb(v/v) |
| Unknown | 1.4 | ppb(v/v) |
| Unknown | 3.5 | ppb(v/v) |
| Unknown | 1.7 | ppb(v/v) |
| Unknown | 1.8 | ppb(v/v) |
| Unknown | 4.8 | ppb(v/v) |

| SURROGATE | PERCENT RECOVERY | LABORATORY CONTROL LIMITS (%) |
|---|---|---|
| 4-Bromofluorobenzene | 95 | 60 - 140 |

Qualifiers

| | |
|---|---|
| J | Estimated result. Result is less than RL. |

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ARCADIS U.S., Inc.

Client Sample ID: DUP-030111

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #** | H1C030562 - 005 | Work Order # | ME6DH1AA | Matrix.....: | AIR |
| **Date Sampled...:** | 03/01/2011 | Date Received..: | 03/03/2011 | | |
| **Prep Date.....:** | 03/11/2011 | Analysis Date... | 03/11/2011 | | |
| **Prep Batch #.....:** | 1070220 | | | | |
| **Dilution Factor.:** | 1 | Method.....: | TO-15 | | |

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | ND | 0.20 | ND | | 1.4 |
| **Acetone** | **1.6** | **5.0** | **3.7** | **J** | **12** |
| 1,4-Dioxane | ND | 0.50 | ND | | 1.8 |
| Ethanol | ND | 2.0 | ND | | 3.8 |
| Ethylbenzene | ND | 0.20 | ND | | 0.87 |
| **Trichlorofluoromethane** | **0.33** | **0.20** | **1.8** | | **1.1** |
| **n-Heptane** | **0.077** | **0.50** | **0.32** | **J** | **2.0** |
| Hexachlorobutadiene | ND | 1.0 | ND | | 11 |
| **n-Hexane** | **0.13** | **0.50** | **0.45** | **J** | **1.8** |
| 2-Hexanone | ND | 0.50 | ND | | 2.0 |
| 2,2,4-Trimethylpentane | ND | 0.50 | ND | | 2.3 |
| **Isopropyl alcohol** | **0.29** | **2.0** | **0.70** | **J** | **4.9** |
| **tert-Butyl alcohol** | **0.075** | **2.0** | **0.23** | **J** | **6.1** |
| **Methylene chloride** | **0.27** | **0.50** | **0.95** | **J** | **1.7** |
| 2-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| **Naphthalene** | **0.094** | **0.50** | **0.49** | **J** | **2.6** |
| Benzene | ND | 0.20 | ND | | 0.64 |
| **n-Octane** | **0.052** | **0.40** | **0.24** | **J** | **1.9** |
| **Pentane** | **0.28** | **1.0** | **0.83** | **J** | **3.0** |
| Benzyl chloride | ND | 0.40 | ND | | 2.1 |
| Styrene | ND | 0.20 | ND | | 0.85 |
| 1,1,2,2-Tetrachloroethane | ND | 0.20 | ND | | 1.4 |
| **Tetrachloroethene** | **0.51** | **0.20** | **3.5** | | **1.4** |
| **Toluene** | **0.26** | **0.20** | **0.98** | | **0.75** |
| 1,2,4-Trichlorobenzene | ND | 1.0 | ND | | 7.4 |
| **1,1,1-Trichloroethane** | **0.29** | **0.20** | **1.6** | | **1.1** |
| 1,1,2-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| **Trichloroethene** | **0.14** | **0.20** | **0.76** | **J** | **1.1** |
| **1,1,2-Trichloro-1,2,2-trifluoroethane** | **0.080** | **0.20** | **0.61** | **J** | **1.5** |
| 1,2,4-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| 1,3,5-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| Vinyl chloride | ND | 0.20 | ND | | 0.51 |
| **o-Xylene** | **0.074** | **0.20** | **0.32** | **J** | **0.87** |
| 1-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Methyl tert-butyl ether | ND | 1.0 | ND | | 3.6 |
| **n-Decane** | **0.14** | **1.0** | **0.83** | **J** | **5.8** |
| n-Dodecane | ND | 1.0 | ND | | 7.0 |
| n-Undecane | ND | 1.0 | ND | | 6.4 |

ARCADIS U.S., Inc.

Client Sample ID: DUP-030111

GC/MS Volatiles

Lot-Sample # H1C030562 - 005 Work Order # ME6DH1AA Matrix.....: AIR

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| Nonane | ND | 0.50 | ND | | 2.6 |
| **m-Xylene & p-Xylene** | **0.15** | **0.20** | **0.63** | **J** | **0.87** |
| Bromodichloromethane | ND | 0.20 | ND | | 1.3 |
| 1,2-Dibromoethane (EDB) | ND | 0.20 | ND | | 1.5 |
| **2-Butanone (MEK)** | **0.28** | **1.0** | **0.84** | **J** | **2.9** |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.50 | ND | | 2.0 |
| Vinyl bromide | ND | 0.20 | ND | | 0.87 |
| **n-Butane** | **0.49** | **0.40** | **1.2** | | **0.95** |
| Bromoform | ND | 0.20 | ND | | 2.1 |
| Bromomethane | ND | 0.20 | ND | | 0.78 |
| Indene | ND | 0.40 | ND | | 1.9 |
| 1,3-Butadiene | ND | 0.40 | ND | | 0.88 |
| 4-Ethyltoluene | ND | 0.40 | ND | | 2.0 |
| Thiophene | ND | 0.20 | ND | | 0.69 |
| **Carbon disulfide** | **0.052** | **0.50** | **0.16** | **J** | **1.6** |
| **Carbon tetrachloride** | **0.16** J | **0.20** | **0.98** | **J** | **1.3** |
| Chlorobenzene | ND | 0.20 | ND | | 0.92 |
| 1,2,3-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| Dibromochloromethane | ND | 0.20 | ND | | 1.7 |
| Chloroethane | ND | 0.20 | ND | | 0.53 |
| **Chloroform** | **0.91** | **0.20** | **4.5** | | **0.98** |
| Chloromethane | ND | 0.50 | ND | | 1.0 |
| 3-Chloropropene | ND | 0.20 | ND | | 0.63 |
| 1,2,4,5-Tetramethylbenzene | ND | 0.20 | ND | | 1.1 |
| Indane | ND | 0.20 | ND | | 0.97 |
| 2-Chlorotoluene | ND | 0.40 | ND | | 2.1 |
| 1,2,3,4-Tetramethylbenzene | ND | 0.22 | ND | | 1.2 |
| 1,2,3,5-Tetramethylbenzene | ND | 0.20 | ND | | 1.1 |
| **Cyclohexane** | **0.21** | **0.50** | **0.74** | **J** | **1.7** |
| 1,2-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| 1,3-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| 1,4-Dichlorobenzene | ND | 0.20 | ND | | 1.2 |
| **Dichlorodifluoromethane** | **0.60** | **0.20** | **3.0** | | **0.99** |
| 1,1-Dichloroethane | ND | 0.20 | ND | | 0.81 |
| 1,2-Dichloroethane | ND | 0.20 | ND | | 0.81 |
| 1,1-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| cis-1,2-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| trans-1,2-Dichloroethene | ND | 0.20 | ND | | 0.79 |
| 1,2-Dichloropropane | ND | 0.20 | ND | | 0.92 |
| cis-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 1.8 | ppb(v/v) |

ARCADIS U.S., Inc.

Client Sample ID: DUP-030111

GC/MS Volatiles

**Lot-Sample #** H1C030562 - 005 **Work Order #** ME6DH1AA **Matrix.....:** AIR

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 160 | ppb(v/v) |
| Unknown | 2.2 | ppb(v/v) |
| Unknown | 1.4 | ppb(v/v) |

| SURROGATE | PERCENT RECOVERY | LABORATORY CONTROL LIMITS (%) |
|---|---|---|
| 4-Bromofluorobenzene | 95 | 60 - 140 |

Qualifiers

J Estimated result. Result is less than RL.

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ARCADIS U.S., Inc.

Client Sample ID: AMB-030111

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample # | H1C030562 - 006 | Work Order # | ME6DK1AA | Matrix.....: | AIR |
| Date Sampled...: | 03/01/2011 | Date Received..: | 03/03/2011 | | |
| Prep Date.....: | 03/11/2011 | Analysis Date... | 03/11/2011 | | |
| Prep Batch #.....: | 1070220 | | | | |
| Dilution Factor.: | 1 | Method.....: | TO-15 | | |

| PARAMETER | RESULTS (ppb(v/v)) | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | 0.20 | ND | | 0.91 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | ND | 0.20 | ND | | 1.4 |
| **Acetone** | **1.5** | **5.0** | **3.6** | **J** | **12** |
| 1,4-Dioxane | ND | 0.50 | ND | | 1.8 |
| Ethanol | ND | 2.0 | ND | | 3.8 |
| **Ethylbenzene** | **0.082** | **0.20** | **0.35** | **J** | **0.87** |
| **Trichlorofluoromethane** | **0.27** | **0.20** | **1.5** | | **1.1** |
| **n-Heptane** | **0.094** | **0.50** | **0.39** | **J** | **2.0** |
| Hexachlorobutadiene | ND | 1.0 | ND | | 11 |
| **n-Hexane** | **0.31** | **0.50** | **1.1** | **J** | **1.8** |
| 2-Hexanone | ND | 0.50 | ND | | 2.0 |
| **2,2,4-Trimethylpentane** | **0.11** | **0.50** | **0.50** | **J** | **2.3** |
| **Isopropyl alcohol** | **0.91** | **2.0** | **2.2** | **J** | **4.9** |
| **tert-Butyl alcohol** | **0.046** | **2.0** | **0.14** | **J** | **6.1** |
| **Methylene chloride** | **0.25** | **0.50** | **0.88** | **J** | **1.7** |
| 2-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Naphthalene | ND | 0.50 | ND | | 2.6 |
| **Benzene** | **0.28** | **0.20** | **0.89** | | **0.64** |
| n-Octane | ND | 0.40 | ND | | 1.9 |
| **Pentane** | **1.3** | **1.0** | **3.9** | | **3.0** |
| Benzyl chloride | ND | 0.40 | ND | | 2.1 |
| Styrene | ND | 0.20 | ND | | 0.85 |
| 1,1,2,2-Tetrachloroethane | ND | 0.20 | ND | | 1.4 |
| **Tetrachloroethene** | **0.24** | **0.20** | **1.6** | | **1.4** |
| **Toluene** | **0.42** | **0.20** | **1.6** | | **0.75** |
| 1,2,4-Trichlorobenzene | ND | 1.0 | ND | | 7.4 |
| 1,1,1-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| 1,1,2-Trichloroethane | ND | 0.20 | ND | | 1.1 |
| **Trichloroethene** | **0.13** | **0.20** | **0.70** | **J** | **1.1** |
| **1,1,2-Trichloro-1,2,2-trifluoroethane** | **0.081** | **0.20** | **0.62** | **J** | **1.5** |
| 1,2,4-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| 1,3,5-Trimethylbenzene | ND | 0.20 | ND | | 0.98 |
| Vinyl chloride | ND | 0.20 | ND | | 0.51 |
| **o-Xylene** | **0.095** | **0.20** | **0.41** | **J** | **0.87** |
| 1-Methylnaphthalene | ND | 2.5 | ND | | 15 |
| Methyl tert-butyl ether | ND | 1.0 | ND | | 3.6 |
| n-Decane | ND | 1.0 | ND | | 5.8 |
| n-Dodecane | ND | 1.0 | ND | | 7.0 |
| n-Undecane | ND | 1.0 | ND | | 6.4 |

ARCADIS U.S., Inc.

Client Sample ID: AMB-030111

GC/MS Volatiles

Lot-Sample # H1C030562 - 006 Work Order # ME6DK1AA Matrix.....: AIR

| PARAMETER | RESULTS (ppb(v/v)) | | REPORTING LIMIT (ppb(v/v)) | RESULTS (ug/m3) | | REPORTING LIMIT (ug/m3) |
|---|---|---|---|---|---|---|
| Nonane | ND | | 0.50 | ND | | 2.6 |
| **m-Xylene & p-Xylene** | **0.27** | | **0.20** | **1.2** | | **0.87** |
| Bromodichloromethane | ND | | 0.20 | ND | | 1.3 |
| 1,2-Dibromoethane (EDB) | ND | | 0.20 | ND | | 1.5 |
| **2-Butanone (MEK)** | **0.30** | | **1.0** | **0.88** | **J** | **2.9** |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.50 | ND | | 2.0 |
| Vinyl bromide | ND | | 0.20 | ND | | 0.87 |
| **n-Butane** | **2.6** | | **0.40** | **6.3** | | **0.95** |
| Bromoform | ND | | 0.20 | ND | | 2.1 |
| Bromomethane | ND | | 0.20 | ND | | 0.78 |
| Indene | ND | | 0.40 | ND | | 1.9 |
| 1,3-Butadiene | ND | | 0.40 | ND | | 0.88 |
| 4-Ethyltoluene | ND | | 0.40 | ND | | 2.0 |
| Thiophene | ND | | 0.20 | ND | | 0.69 |
| Carbon disulfide | ND | | 0.50 | ND | | 1.6 |
| **Carbon tetrachloride** | **0.11** | J | **0.20** | **0.66** | **J** | **1.3** |
| Chlorobenzene | ND | | 0.20 | ND | | 0.92 |
| 1,2,3-Trimethylbenzene | ND | | 0.20 | ND | | 0.98 |
| Dibromochloromethane | ND | | 0.20 | ND | | 1.7 |
| Chloroethane | ND | | 0.20 | ND | | 0.53 |
| Chloroform | ND | | 0.20 | ND | | 0.98 |
| **Chloromethane** | **0.66** | | **0.50** | **1.4** | | **1.0** |
| 3-Chloropropene | ND | | 0.20 | ND | | 0.63 |
| 1,2,4,5-Tetramethylbenzene | ND | | 0.20 | ND | | 1.1 |
| Indane | ND | | 0.20 | ND | | 0.97 |
| 2-Chlorotoluene | ND | | 0.40 | ND | | 2.1 |
| 1,2,3,4-Tetramethylbenzene | ND | | 0.22 | ND | | 1.2 |
| 1,2,3,5-Tetramethylbenzene | ND | | 0.20 | ND | | 1.1 |
| **Cyclohexane** | **0.13** | | **0.50** | **0.45** | **J** | **1.7** |
| 1,2-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| 1,3-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| 1,4-Dichlorobenzene | ND | | 0.20 | ND | | 1.2 |
| **Dichlorodifluoromethane** | **0.57** | | **0.20** | **2.8** | | **0.99** |
| 1,1-Dichloroethane | ND | | 0.20 | ND | | 0.81 |
| 1,2-Dichloroethane | ND | | 0.20 | ND | | 0.81 |
| 1,1-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| cis-1,2-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| trans-1,2-Dichloroethene | ND | | 0.20 | ND | | 0.79 |
| 1,2-Dichloropropane | ND | | 0.20 | ND | | 0.92 |
| cis-1,3-Dichloropropene | ND | | 0.20 | ND | | 0.91 |

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Butane, 2-methyl- | 1.6 | ppb(v/v) |

ARCADIS U.S., Inc.

Client Sample ID: AMB-030111

GC/MS Volatiles

**Lot-Sample #** H1C030562 - 006 **Work Order #** ME6DK1AA **Matrix.....:** AIR

| TENTATIVELY INDENTIFIED COMPOUNDS | RESULT | UNITS |
|---|---|---|
| Unknown | 1.0 | ppb(v/v) |
| Unknown | 1.1 | ppb(v/v) |

| SURROGATE | PERCENT RECOVERY | LABORATORY CONTROL LIMITS (%) |
|---|---|---|
| 4-Bromofluorobenzene | 95 | 60 - 140 |

Qualifiers

| | |
|---|---|
| J | Estimated result. Result is less than RL. |

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

**TAL Knoxville**
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HIC030562

# Canister Samples Chain of Custody Record

*TestAmerica assumes no liability with respect to the collection and shipment of these samples.*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | |
|---|---|---|---|
| Client Contact Information | Project Manager: Luke Tefis | Sampled By: Dan Zuck | 1 of 1 COCs |
| Company: Arcadis | Phone: | 516-369-2741 | |
| Address: 6723 Towpath Rd | Site Contact: Daniel Zack | | |
| City/State/Zip: Syracuse, NY 13323 | TAL Contact: Jamie McKinney | | |
| Phone: #315-671-9120 | | | |
| FAX: 315-671-9152 | | | |
| Project Name: National Grid | Analysis Turnaround Time | | |
| Site/location: Grand Street (Albany, NY) | Standard (Specify) 3 weeks | | |
| PO# B0036639.0.13 | Rush (Specify) ASA | | |

| Sample Identification | Sample Date(s) | Time Start | Time Stop | Canister Vacuum in Field, "Hg (Start) | Canister Vacuum in Field, "Hg (Stop) | Flow Controller ID | Canister ID. | TO-15 + Spectral List (Note Grid) | TO-14A | EPA 3C | EPA/25C | ASTM D-1946 | Other (Please specify in notes section) Helium | Sample Type | Indoor Air | Ambient Air | Soil Gas | Landfill Gas | Other (Please specify in notes section) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VP-1 | 3/1/11 | 1347 | 1920 | -31 | -6 | K245 | 12578 | X | | | | | X | | | | X | | |
| VP-2 | | 1408 | 1937 | -31 | -6 | K243 | S-1505 | X | | | | | X | | | | X | | |
| VP-3 | | 1443 | 1805 | -30 | -6 | K503 | 1490 | X | | | | | X | | | | X | | |
| VP-4 | | 1445 | 2007 | -30 | -6 | K439 | 7493 | X | | | | | X | | | | X | | |
| DUP-030111 | | — | — | -31 | -7.5 | K258* | 1121 | X | | | | | X | | | | X | | |
| AMB-030111 | | 1340 | 1920 | -33 | -6 | K268 | 04397 | X | | | | | | | | X | | | |

**Sampled by :** Daniel Zuck

| Temperature (Fahrenheit) | Interior | Ambient |
|---|---|---|
| Start | | 41.3°F |
| Stop | | 28.0°F |

| Pressure (inches of Hg) | Interior | Ambient |
|---|---|---|
| Start | | -33 |
| Stop | | -6 |

1 box with CUSTODY SEALS
RECEIVED @ AMBIENT TEMP
R.H. 3/3/11
1 box FED EX 875704367459
6 CANS 6 FLOWS 1 TBAR

**Special Instructions/QC Requirements & Comments:**
Please Report Results to Luke Tefis, Phone: 518-860-2963.
* K258

| | | | |
|---|---|---|---|
| Canisters Shipped by: Daniel Zuck | Date/Time: 3/2/11 0830 | Canisters Received by: | |
| Samples Relinquished by: Daniel Zuck | Date/Time: 3/2/11 0830 | Received by: Rita Howard | Date/Time: 3/3/11 10:00 |
| Relinquished by: | Date/Time: | Received by: | |