

**Environmental Restoration Program  
Final Technical Memorandum  
Site 15 Data Gap Investigation**

**174<sup>th</sup> Fighter Wing  
New York Air National Guard  
Hancock Air National Guard Base  
Syracuse, New York**

**August 2011**



**NGB/A7OR  
Joint Base Andrews, Maryland**

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Final Technical Memorandum  
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## LIST OF ACRONYMS

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<u>Acronym</u>	<u>Definition</u>
µg/L	Micrograms per liter
AFB	Air Force Base
ANG	Air National Guard
AOC	Area of Concern
BEX	Benzene, Ethylbenzene and Xylenes
BGC	Brooklawn Golf Course
bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CaO <sub>2</sub>	Calcium Peroxide
DGI	Data Gap Investigation
ELAP	Environmental Laboratory Approval Program
EPA	United States Environmental Protection Agency
ERM	Environmental Resources Management
ft	Feet
FW	Fighter Wing
GE	General Electric
HVAC	Heating, ventilation and air conditioning
IDW	Investigation Derived Waste
JP	Jet propulsion
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O.D.	Outside diameter
PID	Photo ionization Detector
PT	Pilot Test
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RamTech	Ram-Tech Engineers
RI/PT	Remedial Investigation/Pilot Test
ROD	Record of Decision
SCG	Standards, Criteria, and Guidance
TM	Technical Memorandum
VOCs	Volatile Organic Compounds

## EXECUTIVE SUMMARY

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This Final Technical Memorandum (TM) to the Supplemental Remedial Investigation/Pilot Test (RI/PT) for the Site 15 Data Gap Investigation (DGI) has been prepared for the Environmental Restoration Program at the 174<sup>th</sup> Fighter Wing (FW) of the New York Air National Guard (ANG) in Syracuse, New York. This TM was completed under Task 3A of Delivery Order 0137 under National Guard Bureau contract DAHA92-01-D-0005 between ERM-West, Inc. (ERM) and the National Guard Bureau, Departments of the Army and Air Force.

A *Final Work Plan Addendum for Site 15 RI/PT* (ERM 2010) was prepared and submitted in August 2010. This Work Plan Addendum addressed the Supplemental RI/PT Work Plan for Site 15 DGI work scope of an additional round of groundwater monitoring completed in October 2010 and an indoor air evaluation performed at the Ram-Tech Engineers (RamTech) property between January and March 2011. All data collected during execution of the Work Plan Addendum is presented in this TM.

The groundwater monitoring event was performed in October 2010. The thirty wells (both on-site and off-site) were sampled in general conformance with United States Environmental Protection Agency (EPA) low-flow (minimal drawdown) well purging and sample collection techniques (EPA 1996). The low-flow groundwater purging/sampling technique employed the use of a flow-through cells (Horiba U-22 and/or the YSI 600XL) equipped with probes connected to an electronic water quality meter for measuring parameters such as pH, temperature, conductivity, dissolved oxygen, and oxidation reduction potential.

Based on this additional investigation described in this TM, as per the previous investigation, the extent of BEX-affected groundwater has been delineated on the Hancock ANG property, the Brooklawn Golf Course (BGC) property, and the RamTech property with the plume dissipating within the boundaries of the General Electric (GE) Property

Natural attenuation parameters from the October 2010 sampling event were compared to previous data and the recommendations detailed in Appendix A of the Final FFS submitted to the ANG and the NYSDEC in March 2010 are still appropriate.



The evaluation of natural attenuation data indicates that the Pilot Test (PT) injection of calcium peroxide (CaO<sub>2</sub>) enhanced the natural attenuation process. Remedial Alternative No. 3, as recommended in the ANG and the New York State Department of Environmental Conservation (NYSDEC) approved Final Record of Decision (ROD) (ERM 2011), should be implemented as soon as possible.

Two rounds of sub-slab, background outdoor air and “room” indoor air samples were collected in axial sorbent tubes using positive displacement pumping. Sorbent methodology uses EPA Method TO-17 to analyze soil vapor samples for the presence of volatile organic compounds (VOCs) and for this application the analytes are limited to benzene, ethylbenzene and xylene (BEX) plus the analytes as shown on the analyte list in the approved Work Plan Appendix E of the Quality Assurance Project Plan (QAPP). Method TO-17 is an approved analytical method in the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (New York State Department of Health (NYSDOH 2006). At the same time, a passive (no pump) 30-day sample was initiated and collected in axial sorbent tubes.

Evaluation of indoor air monitoring at the RamTech facility indicates that an indoor air issue associated with the BEX compounds of the Site 15 investigation is not present. Additional investigation of air data is not recommended at this time.

## SECTION 1.0

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**INTRODUCTION**

This Final TM to the Supplemental RI/PT for the Site 15 DGI has been prepared for the Environmental Restoration Program at the 174<sup>th</sup> FW of the New York ANG in Syracuse, New York. This Final TM was completed under Task 3A of Delivery Order 0137 under National Guard Bureau contract DAHA92-01-D-0005 between ERM and the National Guard Bureau, Departments of the Army and Air Force.

Based on the additional investigation previously described the March 2010 *Final Technical Memorandum Supplemental Remedial Investigation/Pilot Test* (ERM 2010a), the extent of benzene, toluene, ethylbenzene, and total xylenes (BTEX) affected groundwater has been delineated on the Hancock ANG Base property, BCG property, and on RamTech property with the plume dissipating within the boundaries of the GE Property. An additional round of groundwater monitoring was recommended to be performed.

A soil vapor survey was performed at the RamTech property in October 2009 as part of the *Final Technical Memorandum Supplemental Remedial Investigation/Pilot Test* (ERM 2010b); Based upon results of the soil vapor and groundwater data collected in the vicinity of the RamTech building, an indoor air evaluation was recommended to be performed.

The *Final Work Plan Addendum for Site 15 RI/PT* (ERM 2010) was prepared and submitted in August 2010. This Work Plan Addendum addressed the scope of work which consisted of an additional round of groundwater monitoring and an indoor air evaluation performed at the RamTech property. All data collected during execution of the Work Plan Addendum is presented in this TM.

## **1.1 Project Objectives and Scope**

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The objectives of the groundwater monitoring and indoor air evaluation are to:

- Evaluate the effectiveness of enhanced natural attenuation in treating BEX in groundwater;
- Verify that the BEX plume is not migrating onto down-gradient properties; and
- Determine whether the VOCs detected in the October 2009 soil vapor survey have impacted the RamTech facility work environment.

The scope of work consisted of the collection of an additional round of groundwater monitoring and an indoor air evaluation performed at the RamTech property. The scope of work was completed according to the *Final Work Plan Addendum for Site 15 RI/PT* (ERM 2010) as submitted in August 2010.

## **1.2 General Investigation Approach**

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One groundwater monitoring round was conducted in early October 2010 that included a total of 30 wells located on and around Site 15. All groundwater sampling was performed by low-flow methodology in accordance with applicable federal, state, and local regulations. In accordance with NYSDEC DER-10, Appendix 1A, *Final Technical Guidance for Site Investigation and Remediation* (NYSDEC 2010), Periodic monitoring the head space of the monitoring wells and the ambient air space was performed for the presence of VOCs with a calibrated photoionization detector (PID).

Two separate indoor air monitoring events were also performed. A total of seven air and vapor samples were collected during each event at the location approved by the operating officer of the RamTech Facility.

The scope of work was completed according to the *Final Work Plan Addendum for Site 15 RI/PT* (ERM 2010).

## **1.3 Technical Memorandum Structure**

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This TM was written in general conformance with the guidelines presented in ANG's *Environmental Restoration Program Investigation Guidance* (ANG 2005). It provides a description of the activities performed and is organized as follows:

- [Section 1.0](#) – Introduction;
- [Section 2.0](#) – Site Description;
- [Section 3.0](#) – Environmental Setting;
- [Section 4.0](#) – Field Program;
- [Section 5.0](#) – Investigation Findings;
- [Section 6.0](#) – Conclusions;
- [Section 7.0](#) – Recommendations;
- [Section 8.0](#) – References;
- [Appendix A](#) – Low-Flow Data Sheets – Monitoring Well Sampling
- [Appendix B](#) – Laboratory Reports; and
- [Appendix C](#)– QA/QC Evaluation Results.

## SECTION 2.0

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**SITE DESCRIPTION****2.1 Installation Description**

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This section provides an overview of the project site as related to the Hancock ANGB Supplemental RI/PT for the 2010 DGI. The 174<sup>th</sup> FW of the New York ANG is based at Hancock Field, an active international airport and a former Air Force Base (AFB) located 2 miles north-northeast of the City of Syracuse in Onondaga County in central New York (Figure 1). The 174<sup>th</sup> FW supplies air reconnaissance for the eastern portion of the United States.

The ANG facility is currently operating within the southern portion of the former Hancock AFB located south of the municipal airport. Facilities on the base include hangars, support buildings, offices and maintenance buildings (Figure 2). The ANG Readiness Center at Joint Base Andrews Naval Air Facility Washington manages Installation Restoration Program-related efforts for ANG installations. Hancock ANGB is bordered by the airport to the north, the Town of Dewitt to the east and south, and the Town of Salina to the west.

**2.2 Site 15 Description**

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Site 15 was formerly used as a pump house. It is approximately 2.5 acres in area, and originally consisted of brush and wooded vegetation, a large concrete pad, a bermed area where a 215,000-gallon aboveground tank was formerly located, and two drainage swales. One drainage swale borders the Site along the north-northeast side, and a second drainage swale borders the west side of the Site. The drainage swales contain water only intermittently following storm events. Water within the drainage swales does not appear to be hydraulically connected to underlying groundwater (Parsons 2004).

Site 15 has sustained spills of polychlorinated biphenyl, Jet Propulsion (JP)-4, and JP-8 fuels over the years. Several Site structures were removed in 2003 as part of a removal action for polychlorinated biphenyl -impacted

soils. Structures removed include a transformer pad, the foundation of the former pump house, and associated underground structures consisting of six underground tanks, three drainage sumps, and an oil-water separator (Parsons 2004).

### **2.3 Summary of Remedial Investigation Results**

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Based on the results of the additional investigation previously described in the *Final Technical Memorandum Supplemental Remedial Investigation/Pilot Test* (ERM 2010a), the extent of BTEX in groundwater has been delineated on the Hancock ANG and Brooklawn Golf Course properties, and on the RamTech property with the plume dissipating within the boundaries of the GE property. Concentrations of the BTEX compounds are generally decreasing but the latest round of data was obtained in October 2009 and an additional round of groundwater monitoring was recommended.

A soil vapor survey at the RamTech property was performed during the *Supplemental Remedial Investigation/Pilot Test* in October 2009. Based on the evaluation of soil vapor and groundwater data collected in the vicinity of the RamTech building, the potential for soil vapor to migrate within the RamTech building was a possibility. An indoor air evaluation at the RamTech facility was recommended.

## SECTION 3.0

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***ENVIRONMENTAL SETTING***

This section summarizes pertinent information relative to the environmental setting of the project site as related to the Supplemental RI/PT for the 2010 DGI.

**3.1 Climate**

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Syracuse has a four-season continental climate with marked seasonal changes. Geographical location, cyclonic systems and cold air masses affect the Syracuse weather, making winters cold with significant amounts of snow. During the summer and parts of spring and autumn, temperatures customarily rise during the daytime to fall rapidly after sunset, so the nights are relatively cool and comfortable. Temperatures (Fahrenheit) average 23 degrees in January; 46 degrees in April; 70 degrees in July; and 61 degrees in September.

**3.2 Topography**

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The Hancock ANG Base is in Onondaga County in the northwest portion of the United States Geologic Survey Syracuse East quadrangle. The Hancock ANG Base is on generally flat terrain gently sloping to the southeast. Surface elevations generally range from 395 to 415 feet (ft) above mean sea level

**3.3 Geology**

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The surficial geology at Site 15 consists of glaciofluvial sediments deposited by glacial meltwater underlying by poorly sorted till deposited directly by glaciers. The glaciofluvial sediments include silty clays, sands, and gravels, with thickness ranging from 45 to 55 ft. The underlying till consists of gravel, cobbles, and boulders entrained in a silty clay matrix and ranges in thickness from 30 to 100 ft (Lockheed 1997).

Bedrock is encountered at depths ranging from 75 to 109 ft below ground surface (bgs), and is one of the Upper Silurian Vernon Formation. This formation consists of thinly bedded soft red shale with thin beds of green shale, gypsum, halite, and dolomite. Competence varies from soft and crumbly to dense and hard. The degree of competence appears to be proportional to the density of the fractures in the shale. The shale is characterized by enlarged fractures, joints, and bedding planes (Lockheed 1997).

### **3.4 Hydrogeology**

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The overburden at Site 15 consists of fine-grained sediments. The subgrade soils are fairly uniform, with the upper 10 to 15 ft of the soil characterized by relatively soft, dark yellowish-brown silt and silty clay. Towards the southeast the interval thins to approximately 5 ft. Beneath the silty clay are fine- to medium-grained sands, yellowish brown to dark brown with silt, and trace amounts of clay down to a depth of approximately 20 ft. Underlying these silty sands is a lens of stiff clayey silts (often called glacial till). Till was encountered at as much as 15 ft thick (Lockheed 1997).

### **3.5 Critical Habitats and Endangered Species**

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There are no known occurrences of endangered plant or animal species within or near the Site.



## SECTION 4.0

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**FIELD PROGRAM****4.1 Summary**

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The work outlined in the Work Plan was performed as discussed below:

The groundwater monitoring event was performed in October 2010. The thirty wells (both on-site and off-site) were sampled in general conformance with EPA low-flow (minimal drawdown) well purging and sample collection techniques (EPA 1996). Low-flow data sheets associated with the October 2010 groundwater sampling event are presented in [Appendix A](#).

As part of the indoor air evaluation, a pre-sampling inspection of the main level of the RamTech building was performed prior to the sampling event to identify and minimize building factors or conditions that may interfere with the proposed investigation. Information on floor slab layout and condition, construction characteristics, general air flow characteristics, heating, ventilation and air conditioning (HVAC) systems, other potentially relevant physical conditions, and potential sources of VOCs inside the main building were described and documented on a building inventory form. Chemicals or other products used in the building for routine office activities and/or maintenance operations were documented on the building inventory form.

Two rounds of sub-slab, background outdoor air and “room” indoor air samples were collected in axial sorbent tubes using positive displacement pumping. Sorbent methodology uses EPA Method TO-17 to analyze soil vapor samples for the presence of VOCs and for this application the analytes are limited to BEX plus the analytes as shown on the analyte list in the approved Work Plan Appendix E of the QAPP. Method TO-17 is an approved analytical method in the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH 2006). At the same time, a passive (no pump) 30-day sample was initiated and collected in axial sorbent tubes.

#### **4.1.1 Access Agreement**

The ANG worked with RamTech and the ANG to attain access agreements to perform the indoor air testing. Final approval by the ANG of the access agreement was received on 4 January 2011.

#### **4.1.2 Groundwater Sampling**

A complete groundwater sampling event was conducted during the week of 4 October 2009. All existing monitoring wells (total of 30 wells) were sampled as described below. All monitoring well locations are presented on [Figure 3](#).

The following general procedures were used for this groundwater sampling event:

- Monitoring wells were located in the field and opened to allow access for sampling activities. The exterior of each well was visually inspected for signs of damage or tampering and relevant information will be recorded in the field notebook or on an appropriate form.
- Field personnel wore appropriate health and safety equipment as outlined in the Level II Health and Safety Form. Samplers put on new sampling gloves at each individual well location prior to sampling.
- The well cap was removed and a calibrated PID with a minimum 10.2 eV lamp was used to measure the concentration of VOCs at the top of the well riser.
- Depth to water and the depth to the bottom of the well were measured to the nearest 0.01-ft using an electronic water level indicator or an interface probe. The water level indicator or the interface probe was cleaned between wells using decontamination procedures described in the *Groundwater Monitoring Work Plan* (ERM 2006).
- Adjustable-rate, peristaltic pumps were utilized for purging/sampling of each well. The dedicated tubing was slowly lowered into the well to a depth approximately 6-inches above the bottom of the well to prevent mobilization of any sediment.
- During purging the depth to water, pumping rates, turbidity, temperature, specific conductance, pH, oxygen reduction potential,

and dissolved oxygen were measured and recorded every 5 minutes or as appropriate based on field conditions.

- Pumping rates were adjusted to minimize drawdown and/or to facilitate stabilization of field parameters as required.
- Purging ceased when the turbidity dropped below 50 Nephelometric Turbidity Units and/or field parameters have stabilized as follows for three consecutive readings:
  - $\pm 0.1$  for pH;
  - Temperature  $\pm 0.1$  degree Celsius; and
  - $\pm 10$  percent for specific conductance (conductivity).
- Before sampling, the flow-through cell was disconnected to collect groundwater samples before the flow-through cell. Each of the sample containers were filled by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence and agitation.
- Sample bottles were labeled using waterproof pens. All samples were placed into a pre-chilled cooler for subsequent delivery to LSL.

The groundwater samples submitted to Test America of North Canton, Ohio, an approved environmental laboratory using EPA-approved or standard methods. The samples were analyzed for BEX by EPA Method 8260. In addition, during the groundwater sampling event, all monitoring wells were analyzed for the following natural attenuation parameters to evaluate the performance of the PT:

- Alkalinity using SM 18 2320B;
- Ammonia using EPA 350.2;
- Methane using GC FID;
- Nitrate using EPA 300;
- Sulfate using EPA 300; and
- Total hardness using EPA 200.7.

All natural attenuation parameters listed above were also analyzed at Test America. In addition, the samples were field-tested for ferrous iron using

a Hach Model IR-18C ferrous iron test kit (1,10-phenanthroline iron reagent method). The results of ferrous iron analyses in the field were recorded in the field notebook and/or on appropriate sampling forms.

As previously discussed, depth to groundwater was measured to the nearest 0.01-foot using an electronic water level indicator or an interface probe. The water level indicator and the interface probe were decontaminated between wells using decontamination procedure outlined in the Work Plan. A summary of groundwater elevations is presented in [Table 1](#). A static groundwater elevation contour map for October 2010 is also presented on [Figure 3](#).

Laboratory data reports are presented in [Appendix B](#). Associated Quality Assurance/Quality Control (QA/QC) samples were collected in accordance with the project QAPP. QA/QC information associated with groundwater sampling results is presented in [Appendix C](#) of this Final TM.

### **4.1.3 Indoor Air Monitoring**

Two indoor air sampling events were performed, one in the early to mid winter (10 January 2011) and one during mid to late winter (4 February 2011). One sub-slab sample and one indoor air sample with associated duplicates were collected during each sampling event.

The sub-slab samples were installed and collected as per Section 2.7.2 of the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH 2006). A 1-inch diameter hole was drilled to a depth of approximately 4-inches into the concrete floor slab using an electric hammer drill. A ½-inch drill bit will be used to drill through the remaining thickness of the slab and not more than 2-inches into the sub-slab material. A section of ¼-inch outside-diameter (O.D.) Teflon™ tubing was installed to a depth just below the bottom of the concrete slab. The annular space between the 1-inch hole and ¼-inch tubing was sealed with melted beeswax. A calibrated PID was used to purge approximately 1-liter of gas from the subsurface and peak PID readings during purging were recorded on the sampling form. A helium tracer gas was used to determine if ambient air is being drawn into the sampling zone. The Teflon™ tubing was then attached to the stainless steel sorbent tubes and a positive displacement pump.

Sub-slab, background outdoor air and indoor air samples were collected in axial sorbent tubes using positive displacement pumping. Sorbent methodology uses EPA Method TO-17 to analyze soil vapor samples for the presence of VOCs and for this application the analytes were limited to BEX plus the analytes as shown on the analyte list presented in Work Plan Appendix E of the QAPP. Method TO-17 is an approved analytical method in the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH 2006). At the same time, a passive (no pump) 30-day sample was initiated and collected in axial sorbent tubes.

The pumps ran for approximately a 24-hour sampling period and all QA/QC samples associated with the method were collected. The collected indoor air samples were logged and transported under chain-of-custody to Vapor Trail Analytical, the NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for air samples. QA/QC information associated with indoor air sampling results is presented in [Appendix C](#) of this Final Final TM.

## **4.2 Deviations from the Work Plan**

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The scope of work for the Supplemental RI/PT for the 2010 DGI assumed access to the RamTech Property in October 2010. Since access to RamTech was not received until 4 January 2011, the scope of work varied as described below:

- Proposed: Two indoor air sampling events will be performed (early fall 2010 and late fall 2010). Two 30-day indoor air passive events were planned associated with each of the indoor air sampling events.
- Performed: Two indoor air sampling events were performed, one in the early to mid winter (10 January 2011) and one during mid to late winter (4 February 2011). The 30-day tubes associated with the 10 January 2011 sampling event did not absorb any volatile compounds and sampling could not be reproduced.

## **4.3 Analytical Activity**

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The Supplemental RI/PT for the 2010 DGI was performed between 4 October 2010 and 9 March 2011. One distinct groundwater sampling event was performed during this investigation resulting in 30-groundwater samples being obtained. Two separate indoor air

monitoring events at the RamTech property were performed between 10 January and 9 March 2011. A total of seven air and vapor samples were collected during each event at the location approved by the operating officer of the RamTech Facility. QA/QC samples were obtained as required with the above referenced samples.

Laboratory reports are presented in [Appendix B](#). QA/QC information relating to the groundwater sampling has been completed and is presented in [Appendix C](#) of this Final TM.

#### **4.4 Investigation-Derived Waste Management**

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Section 4.5 of *Management of Investigation-Derived Wastes during Site Inspections* (EPA 1991) states that non-hazardous soil and liquid investigation-derived waste (IDW) should be left on-site within the area of concern (AOC) unless other circumstances, such as a State Applicable or Relevant and Appropriate Requirements or a high probability of community concerns, require off-site disposal. EPA does not prohibit the disposal of non-hazardous groundwater and/or decontamination fluids in the AOC if they have been containerized and sampled. The following options for non-hazardous IDW management are cited from Section 4.5 of EPA (1991):

- *Groundwater*: pour onto ground next to well and allow infiltration;
- *Decontamination fluids*: pour onto ground from containers to allow infiltration; and
- *Decontaminated personal protective equipment and disposable sampling equipment*: double bag and deposit at the Facility, in an EPA dumpster, or at a municipal landfill.

Non-hazardous IDW generated during the TM was managed in a manner consistent with the options listed above. Groundwater was containerized in 5-gallon buckets and upon completion of sampling; the containerized groundwater was spread on the ground surface adjacent to the particular well location. Used personal protective equipment and disposable sampling equipment was bagged after use and placed in a Base dumpster for subsequent disposal at a NYSDEC-permitted solid waste disposal facility.

## SECTION 5.0

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**INVESTIGATION FINDINGS****5.1 Summary**

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The primary chemical-specific Applicable or Relevant and Appropriate Requirements for groundwater at the Site are the NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. These criteria are contained in the NYSDEC Division of Water *Technical and Operational Guidance Series Memorandum Number 1.1.1* (TOGS 1.1.1; NYSDEC 1998).

The NYSDEC criteria for the compounds present in groundwater analyzed during this TM are listed below. The values shown for BEX are ambient water quality standards.

- Benzene: 1 micrograms per liter ( $\mu\text{g}/\text{L}$ )
- Ethylbenzene: 5  $\mu\text{g}/\text{L}$
- Xylene: 5  $\mu\text{g}/\text{L}$

The results of the Supplemental RIs conducted to date indicate that BEX-affected groundwater extends across the BGC and RamTech properties further down-gradient towards the south-southeast (GE Property) but does not migrate off GE Property.

**5.2 Field Findings**

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All fieldwork associated with the Work Plan and as described above was performed between 4 October 2010 and 9 March 2011. This section summarizes field results and findings from implementation of the Supplemental Remedial Investigation/Pilot Test for the 2010 DGI Supplemental RI.

### 5.2.1 Groundwater Sampling

A complete groundwater sampling event was conducted during the week of 4 October 2010. All 30 existing monitoring wells were sampled as described above in [Section 4.1.2](#). All monitoring well locations are presented on [Figure 3](#).

Field data associated with groundwater sampling is presented in [Appendix A](#). Laboratory data associated with groundwater sampling results are summarized in [Table 2](#). Analytical laboratory reports are presented in [Appendix B](#).

The groundwater analysis indicated BEX concentrations below laboratory method reporting limits in 24 of the 30 monitoring wells. Concentrations of BEX above Standards, Criteria, and Guidance (SCG) were present in MW-11, MW-14, MW-15, MW-19, MW-105, and MW-112. Total BEX concentrations are presented on [Figure 4](#).

Benzene concentrations in the 30 wells ranged from ND to 26 µg/L. [Figure 5](#) shows the lateral extent of benzene in groundwater in October 2010 using all 30 MW sampling locations. Five of the thirty wells had concentrations above the NYSDEC ambient groundwater quality standard of 1 µg/L (NYSDEC 1998). The highest concentration of benzene was found in the area immediately south of the southern fence line of Site 15 and immediately north of Molloy Road on the ANG property.

[Figure 6](#) illustrates the distribution of dissolved ethylbenzene in October 2010 using all the 30 MW locations. Five of the thirty wells had concentrations above the NYSDEC ambient groundwater quality standard of 5 µg/L (NYSDEC 1998). Ethylbenzene concentrations in these five wells ranged from 7.8 to 100 µg/L. Ethylbenzene concentrations were highest in the vicinity of well MW-19 north of Molloy Road on the ANG property and MW-105 on the Brooklawn Golf Course just south of Molloy Road.

[Figure 7](#) shows the distribution of dissolved xylenes in October 2010 using all 30 MW sampling locations. Three of the thirty wells had concentrations above the NYSDEC ambient groundwater quality standard of 5 µg/L. Xylene concentrations in these three wells ranged from 9.5 to 105 µg/L. Xylene concentrations were highest in the vicinity of well MW-19 north of Molloy Road on the ANG property and MW-105 on the Brooklawn Golf Course just south of Molloy Road.



Historically, BTEX compounds have been detected in the groundwater at Site 15. Toluene has not been encountered during groundwater sampling events since 2008.

Total BTEX Trends, as shown on [Figure 8](#), indicates that in general, total BTEX concentrations have been decreasing at Site 15. Concentrations of BEX from groundwater samples taken at MW-105 show a recent slight increase which may be due to rebound after the sustained oxygen release from the oxidant used during the May 2009 Pilot Test injection became depleted.

Natural attenuation parameters from the October 2010 sampling event were compared to previous data and the recommendations detailed in Appendix A of the Final FFS submitted to the ANG and the NYSDEC in March 2010 are still appropriate.

As per the data obtained in this TM and as per the data obtained in the previous investigation, the extent of BEX-affected groundwater has been delineated on the Hancock ANG property, BGC property, and on the RamTech property with the plume dissipating within the boundaries of the GE Property.

### **5.2.2 Indoor Air Monitoring**

Two indoor air sampling events were performed, one in the early to mid winter (10 January 2011) and one during mid to late winter (4 February 2011). One sub-slab sample and one indoor air sample with associated duplicates were collected during each sampling event at the locations shown on [Figure 9](#). During each sampling event, a passive (no pump) 30-day sample was initiated and collected in axial sorbent tubes.

There are no current databases available with background levels of VOCs for indoor air vapors. In the absence of this information, indoor air sampling results are reviewed “as a whole,” in conjunction with the results of other environmental sampling at the site. To put some perspective on the data, the NYDOH and NYSDEC often compare the soil vapor results to the NYSDOH’s background database that was used to evaluate outdoor air data (NYSDOH 2003 and 2).

The results of indoor air evaluation conducted on RamTech’s facility are summarized in [Table 3](#). The evaluation was conducted to characterize the nature of the sub slab and indoor air within the RamTech facility. The results of the sub slab and indoor air evaluation were compared to a statistical evaluation of background concentrations of VOCs 90<sup>th</sup>

percentile of indoor air which are summarized in the *Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes* (NYSDOH 2003) and the Air Guidance Values as presented on Table 3.1 and Matrixes 1 and 2 as presented in the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006).

The summarized concentrations in the tabular summary on [Table 3](#) do not exceed the indoor air 90<sup>th</sup> percentile of the samples collected in the NYSDOH study or the Air Guidance Values. Based on the evaluation of the sub slab and indoor air data along with known groundwater data collected in the vicinity of the RamTech facility, an indoor air issue associated with the BEX compounds of the Site 15 investigation is not present. Additional investigation of air data is not recommended at this time.

## SECTION 6.0

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**CONCLUSIONS**

The Site 15 DGI was performed to evaluate the effectiveness of enhanced natural attenuation in treating BEX in groundwater; verify that the BEX plume is not migrating onto down-gradient properties and determine whether the VOCs detected in the October 2009 soil vapor survey have impacted the RamTech facility work environment.

A significant amount of additional data was obtained during implementation of this Supplemental RI/PT. The following technical conclusions are derived from implementation of the approved *Final Work Plan Addendum for Site 15 RI/PT* (ERM 2010).

1. Test results which are generally decreasing in concentrations indicate that the PT injection of  $\text{CaO}_2$  was effective and natural attenuation was enhanced with the chemical injection.
2. Dissolved-phase BEX in groundwater at concentrations above applicable SCGs has migrated completely across portions of the BGC and RamTech properties to properties further down gradient. This Site 15 DGI confirmed the previous investigation that the end of the plume is somewhere on GE Property as indicated by BEX sampling on the west, south, and east sides of the GE Property.
3. Evaluation of indoor air monitoring at the RamTech facility indicates that an indoor air issue associated with the BEX compounds of the Site 15 investigation is not present.

SECTION 7.0

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***RECOMMENDATIONS***

The following actions based on the results of the Supplemental RI/PT for the 2010 DGI to facilitate remediation of Site 15, including the off-site portion of the plume are recommended:

- Additional investigation of air data is not recommended at this time.
- Remedial Alternative No. 3, as recommended in the ANG and NYSDEC approved Final ROD (ERM 2011), should be implemented as soon as possible.

## SECTION 8.0

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- ANG, 2005. *Environmental Restoration Program Investigation Guidance*
- EPA, 1991. *Management of Investigation-Derived Wastes during Site Inspections*. United States Environmental Protection Agency, Office of Emergency and Remedial Response Directive Number 9345.3-02, EPA/540/G-91/009, Washington, D.C., 88 pp.
- EPA, 1996. *Low-flow (minimal drawdown) groundwater sampling procedures*. United States Environmental Protection Agency Groundwater Issue, Office of Research and Development and Office of Solid Waste and Emergency Response, EPA/540/S-95/504, 12 pp
- ERM, 2011, *Final Record of Decision, 174<sup>th</sup> Fighter Wing - New York Air National Guard- Hancock Air National Guard Base - Syracuse, New York - ERM, Dewitt, New York, April 2011.*
- ERM, 2010, *Final Work Plan Addendum for Site 15 RI/PT, 174<sup>th</sup> Fighter Wing - New York Air National Guard- Hancock Air National Guard Base - Syracuse, New York - ERM, Dewitt, New York, August 2010.*
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- Lockheed. 1997. *Final Remedial Investigation Report for Petroleum, Oil, and Lubricant Facility, Site 15. Volumes I and II*. Prepared by Lockheed Martin for the Air National Guard Readiness Center, Andrews AFB, Maryland. July 1997.
- NYSDEC, 1998. *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. NYSDEC Division of Water

Technical and Operational Guidance Series Memorandum Number 1.1.1., June 1998 (latest amendment April 2000).

NYSDEC, 2010. *DER-10: Technical Guidance for Site Investigation and Remediation*. NYSDEC Division of Environmental Remediation, Albany, May 2010, 226 pp.

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Parsons, 2004. *Remedial Action Plan For Hancock Air National Guard Site 15*. Parsons Engineering Science, Inc., Liverpool, New York, January 2004.

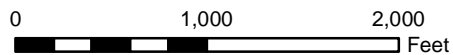
## *FIGURES*





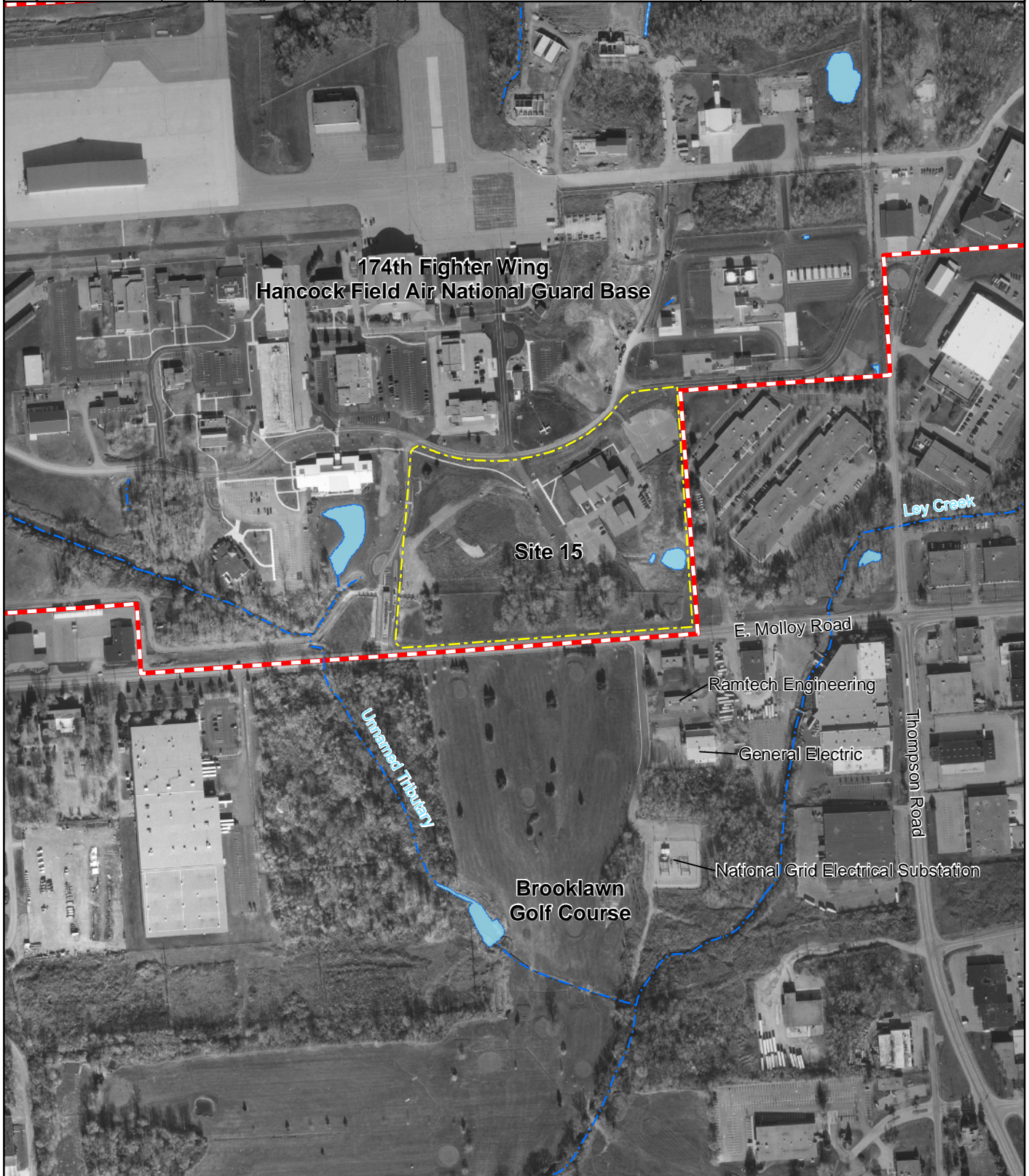
**Legend**

-  Site 15
-  Hancock Field Air National Guard Base Property Boundary







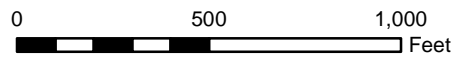
**Figure 1**  
*Site Location Map  
174th Fighter Wing  
New York Air National Guard  
Hancock International Airport  
Syracuse, New York*



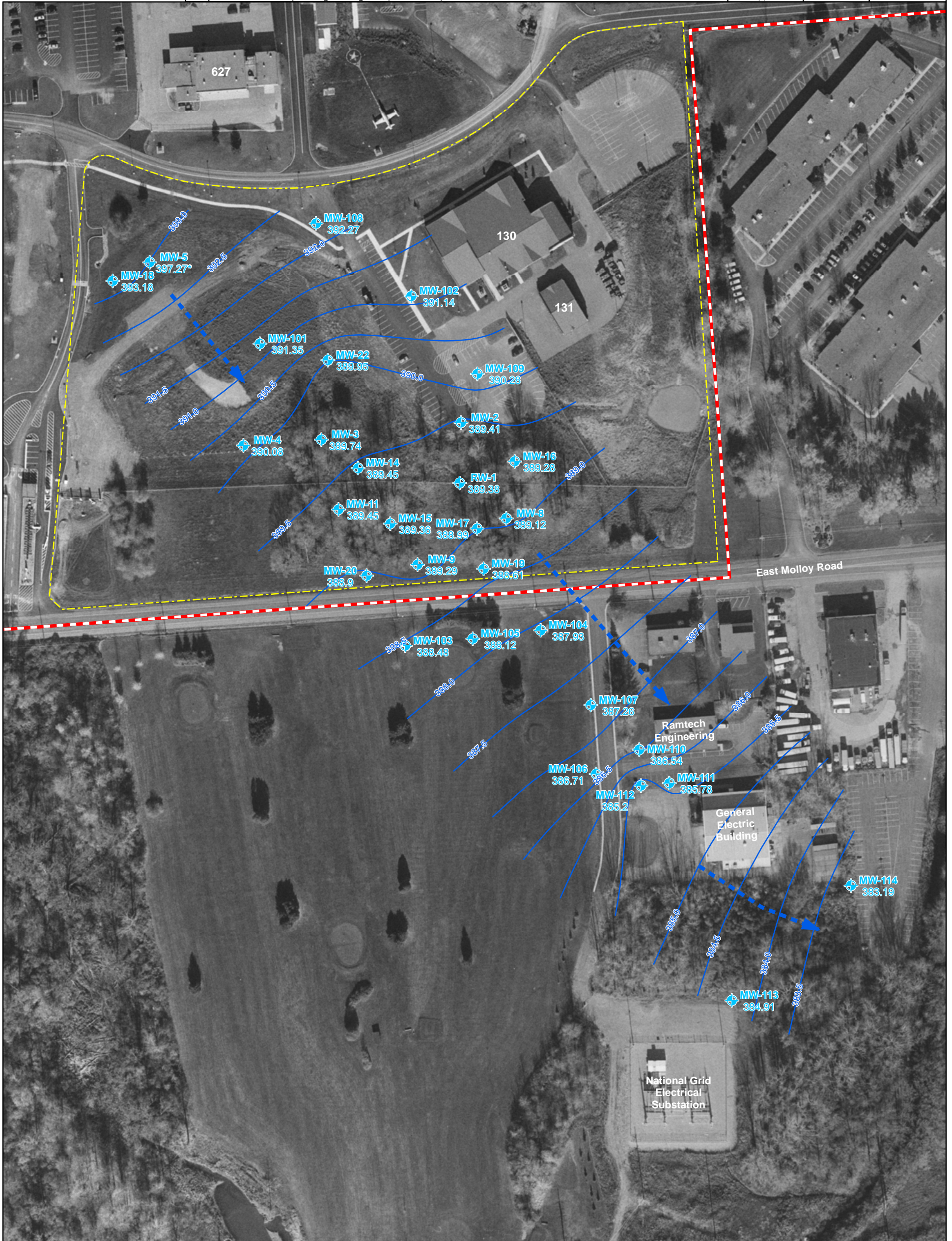


**Legend**

-  Stream or Creek
-  Pond
-  Site 15
-  Hancock Field Air National Guard Base Property Boundary

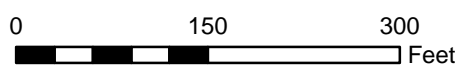


**Figure 2**  
Site Layout  
174th Fighter Wing  
New York Air National Guard  
Hancock International Airport  
Syracuse, New York



**LEGEND**

- Monitoring Well with October 2010 Groundwater Elevation
- Groundwater Contour (1 ft)
- Site 15
- 174th FW Property Boundary
- Groundwater Flow Direction



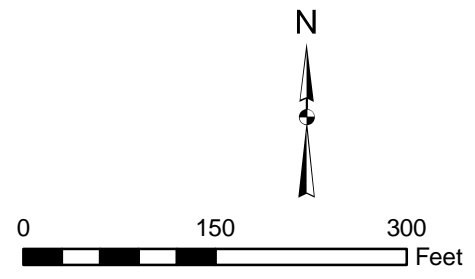
Notes:  
 All elevations in feet above mean sea level (NGVD29).  
 \* - Water level not used for contouring.

**Figure 3**  
 October 2010 Groundwater Contour Map  
 174th Fighter Wing  
 New York Air National Guard  
 Hancock International Airport  
 Syracuse, New York



**LEGEND**

- Monitoring Well
- Approximate Extent of BTEX in Groundwater in 1995
- Approximate Extent of BTEX in Groundwater in 2001
- Approximate Extent of BTEX in Groundwater in 2006
- Approximate Extent of BTEX in Groundwater in 2008
- Approximate Extent of BTEX in Groundwater in 2009
- Approximate Extent of BTEX in Groundwater in 2010
- Site 15
- 174th FW Property Boundary



Notes:  
BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes

**Figure 4**  
*Approximate Extent of BTEX in Groundwater  
1995 through 2010  
174th Fighter Wing  
New York Air National Guard  
Hancock International Airport  
Syracuse, New York*

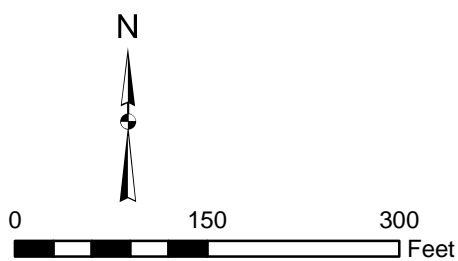


**LEGEND**

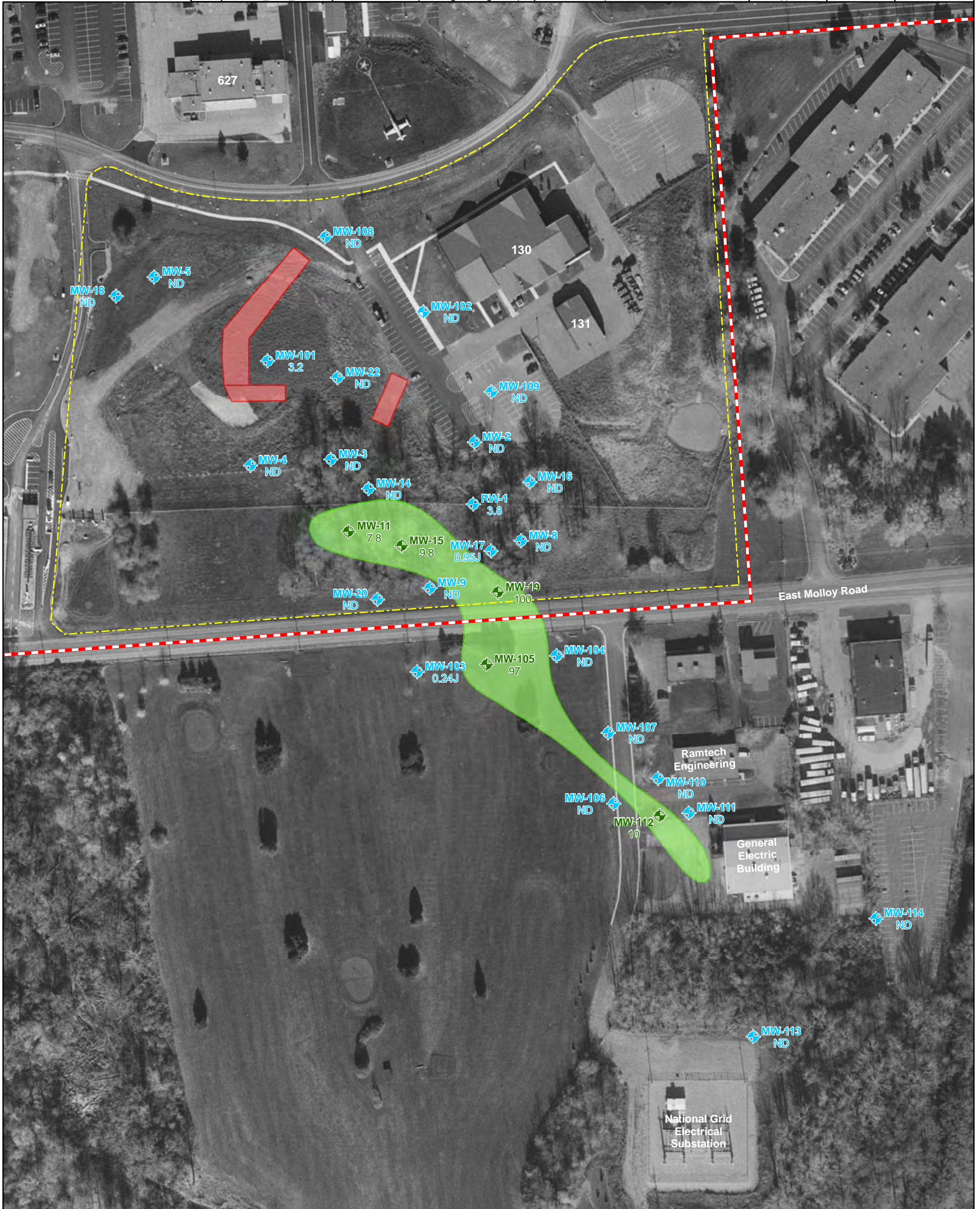
- ◆ Monitoring Well Sampled for Benzene in October 2010
- ◆ Monitoring Well where Benzene exceeded the 1 µg/L NYSDEC Standard in October 2010
- Approximate Extent of Benzene in Groundwater above the 1 µg/L NYSDEC Standard
- Source Area Removal Excavations (August 2008)
- Site 15
- 174th FW Property Boundary

Notes:

µg/L - micrograms per liter  
 ND - Benzene not detected at or above the laboratory reporting limit.  
 < 6.2 Benzene not detected at or above the elevated laboratory reporting limit.  
 All concentrations in micrograms per liter.  
 NYSDEC Standard- NYS Division of Water Technical and Operational Guidance Series (1.1.1) 1998



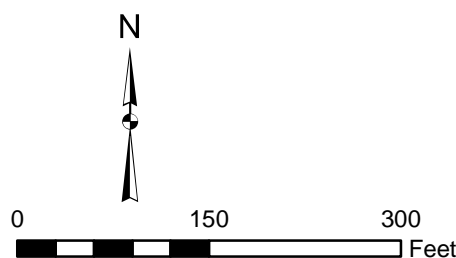
**Figure 5**  
 Groundwater Isoconcentration Map, Benzene  
 174th Fighter Wing  
 New York Air National Guard  
 Hancock International Airport  
 Syracuse, New York



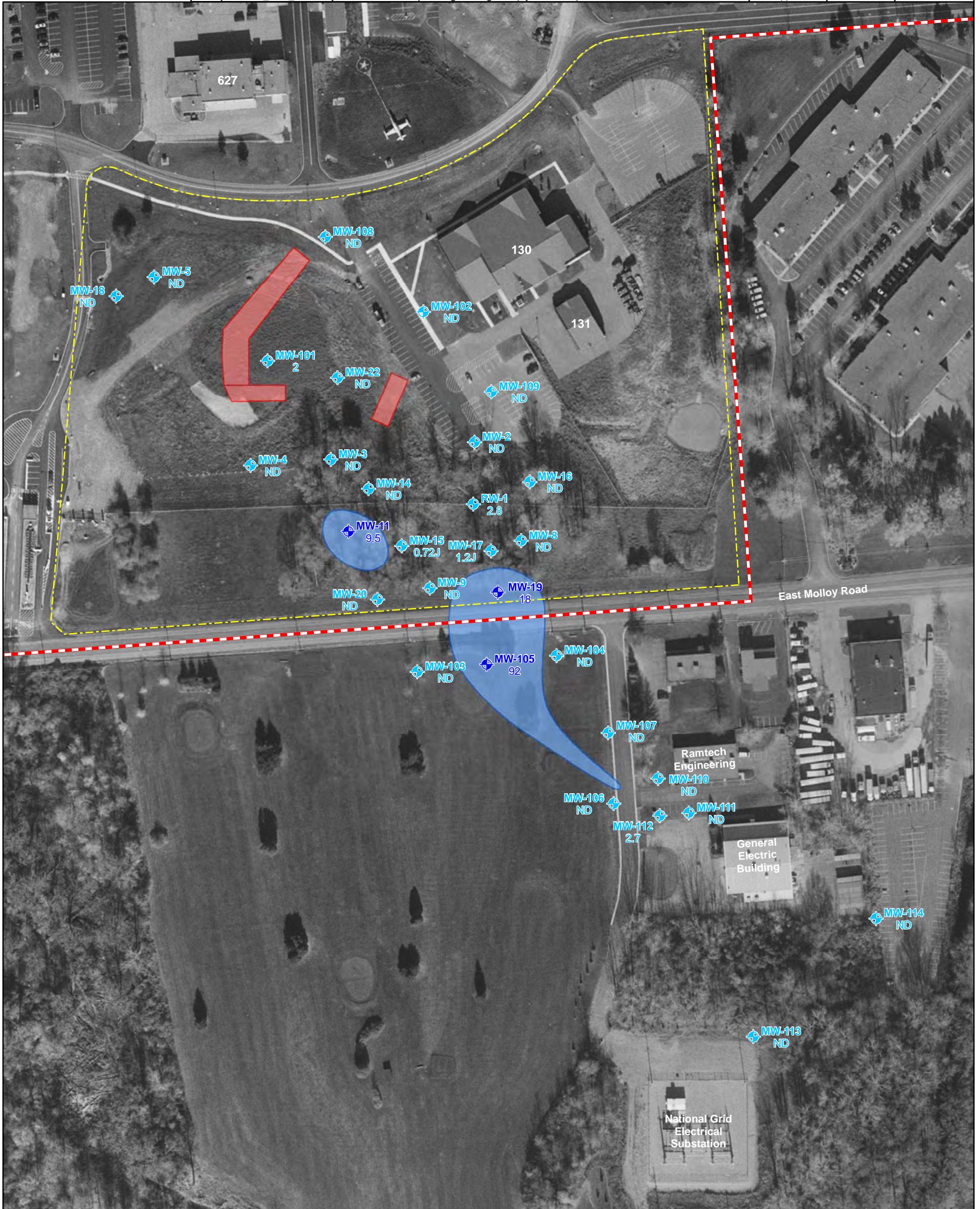
**LEGEND**

- ◆ Monitoring Well Sampled for Ethylbenzene in October 2010
- ◆ Monitoring Well where Ethylbenzene exceeded the 5 µg/L NYSDEC Standard in October 2010
- Approximate Extent of Ethylbenzene in Groundwater above the 5 µg/L NYSDEC Standard
- Source Area Removal Excavations (August 2008)
- Site 15
- 174th FW Property Boundary

Notes:  
 µg/L - micrograms per liter  
 ND - Benzene not detected at or above the laboratory reporting limit.  
 < 6.2 Benzene not detected at or above the elevated laboratory reporting limit.  
 All concentrations in micrograms per liter.  
 NYSDEC Standard- NYS Division of Water Technical and Operational Guidance Series (1.1.1) 1998



**Figure 6**  
 Groundwater Isoconcentration Map, Ethylbenzene  
 174th Fighter Wing  
 New York Air National Guard  
 Hancock International Airport  
 Syracuse, New York

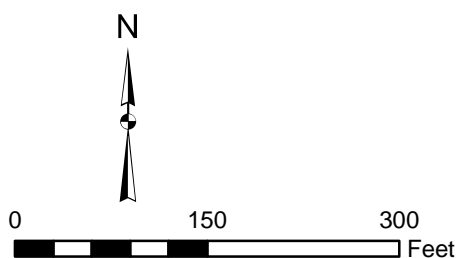


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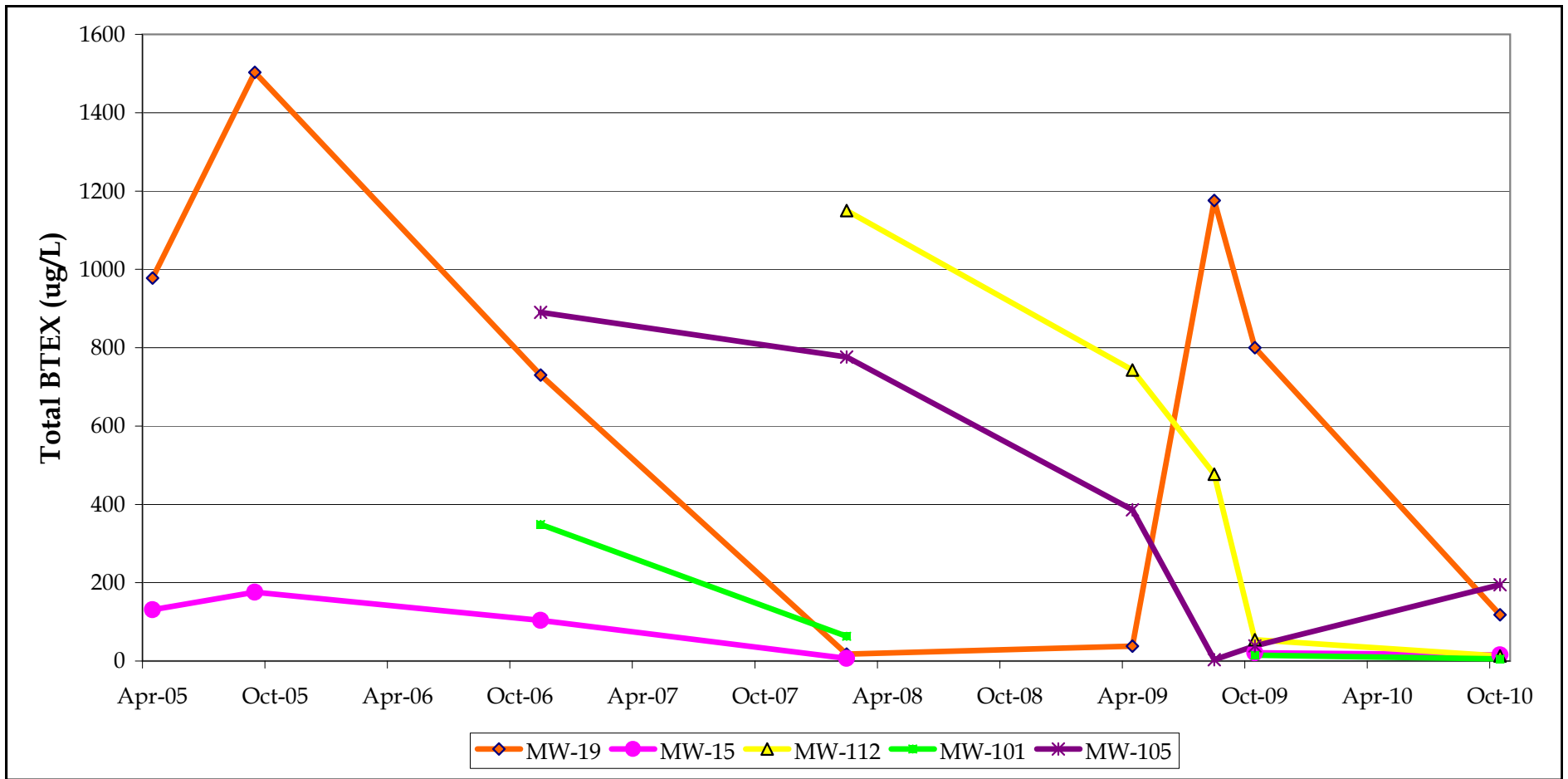
- Monitoring Well Sampled for Xylenes in October 2010
- Monitoring Well where Xylenes exceeded the 5 µg/L NYSDEC Standard in October 2010
- Approximate Extent of Xylenes in Groundwater above the 5 µg/L NYSDEC Standard
- Source Area Removal Excavations (August 2008)
- Site 15
- 174th FW Property Boundary

Notes:

µg/L - micrograms per liter  
 ND - Benzene not detected at or above the laboratory reporting limit.  
 < 6.2 Benzene not detected at or above the elevated laboratory reporting limit.  
 All concentrations in micrograms per liter.  
 NYSDEC Standard- NYS Division of Water Technical and Operational Guidance Series (1.1.1) 1998



**Figure 7**  
 Groundwater Isoconcentration Map, Xylene  
 174th Fighter Wing  
 New York Air National Guard  
 Hancock International Airport  
 Syracuse, New York







	Apr-05	Sep-05	Nov-06	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10
MW-19	978	1,503	730	18	38	1,176	800	118
MW-15	131	176	104	7	NA	NA	21	16
MW-112	NA	NA	NA	1,150	743	477	54	13
MW-101	NA	NA	349	63	NA	NA	15	5
MW-105	NA	NA	890	776	386	3	39	195

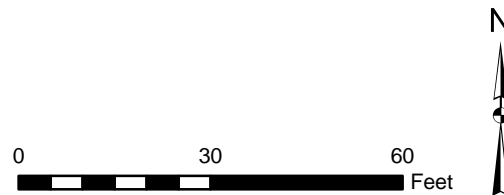
Notes: NA - not available  
 ug/L - micrograms per liter

**Figure 8**  
 Total BTEX Trends  
 174th Fighter Wing  
 New York Air National Guard  
 Hancock International Airport  
 Syracuse, New York



**Legend**

-  Indoor Air Sample Location
-  Indoor Air Duplicate Sample Location
-  Passive Air Sample Location
-  Ramtech Interior Layout



**Figure 9**  
*Indoor Air Sampling Locations  
174th Fighter Wing  
New York Air National Guard  
Hancock International Airport  
Syracuse, New York*



## *TABLES*



**TABLE 1 - Final**  
**SUMMARY OF GROUNDWATER ELEVATION DATA- OCTOBER 2010**  
**HANCOCK AIR NATIONAL GUARD BASE- SYRACUSE, NEW YORK**  
**NYSDEC SITE NUMBER 734054**  
**ERM PROJECT NUMBER 0116255**

Well ID	10.04	10.17	9.72	3.07	8.88	6.86	10.24	13.47	12.81	12.9	11.34	6.92	7.74	8.91	11.16	10.73
Top of Casing	MW-2	MW-3	MW-4	MW-5	MW-8	MW-9	MW-11	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-22	RW-1
Date																
11-Apr-2005	391.17	391.72	391.99	394.76	389.28	390.97	390.14	391.45	390.95	390.71	390.24	394.32	389.66	390.22	392.58	390.87
28-Sep-2005	388.33	388.44	388.67	390.52	387.63	386.99	388.05	388.20	388.00	388.05	387.49	391.12	387.10	387.47	389.26	387.92
6-Nov-2006	390.02	390.96	391.13	393.25	389.69	389.74	390.37	390.65	390.25	390.07	389.60	393.36	389.13	389.58	390.88	390.15
4-Feb-2008	390.04	390.80	392.18	393.26	389.58	389.79	390.18	390.36	390.11	390.00	389.50	393.41	389.11	389.63	390.58	390.06
13-Apr-2009	390.52	391.49	391.62	394.41	390.22	390.57	390.84	391.11	390.65	390.54	390.02	394.08	389.54	389.93	391.50	390.57
6-Oct-2009	388.22	388.68	388.85	390.86	387.95	387.32	388.24	388.41	388.23	388.40	387.79	391.37	387.42	387.70	388.86	388.20
4-Oct-2010	389.41	389.74	390.08	397.27	389.12	389.29	389.45	389.45	389.36	389.28	388.99	393.18	388.61	388.90	389.95	389.38

Well ID	10.23	9.56	9.26	6.50	8.26	1.83	4.59	9.46	9.72	3.23	2.27	3.13	1.02	0.00
Top of Casing	MW-101	MW-102	MW-103	MW-104	MW-105	MW-106	MW-107	MW-108	MW-109	MW-110	MW-111	MW-112	MW-113	MW-114
Date														
11-Apr-2005	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
28-Sep-2005	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6-Nov-2006	392.08	391.60	388.95	388.22	388.57	386.48	387.15	NM	NM	NM	NM	NM	NM	NM
4-Feb-2008	391.79	391.56	389.09	388.30	388.63	386.63	387.41	392.60	390.77	386.51	385.61	386.01	NM	NM
13-Apr-2009	392.74	392.18	389.27	388.62	388.83	386.87	387.65	393.29	391.33	386.76	385.80	386.26	NM	NM
6-Oct-2009	390.06	389.81	387.33	387.01	387.00	385.81	386.31	390.80	389.08	385.74	385.13	385.44	384.25	383.19
4-Oct-2010	391.35	391.14	388.48	387.93	388.12	386.71	387.26	392.27	390.28	386.54	385.78	385.20	384.91	383.19

**NOTES:**

- Top of casing provided by others.
- Measurements reported in feet.
- NM - Not measured.
- MW-114 was artesian.

Table 2 Final  
SUMMARY OF GROUNDWATER ANALYTICAL DATA - 2005 through 2010  
SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD  
HANCOCK FIELD, SYRACUSE, NY  
NYSDEC SITE NUMBER 734054  
ERM PROJECT NUMBER 0116255

WELL ID	MW-2						MW-3					MW-4					MW-5					NYSDEC STANDARD				
	Sample Date	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05		Nov-06	Feb-08	Oct-09	Oct-10
VOCs (ug/l)																										
BENZENE	----	----	----	----	----	----	200	57	75	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
ETHYL BENZENE	3.5	83	52	----	200	----	200	16	61	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5
TOLUENE	----	----	----	----	NA	NA	----	----	0.34J	----	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	5	
XYLENE	2	98	44	----	370	----	95	15	28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	
MTBE	----	----	----	----	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	10	
NATURAL ATTENUATION PARAMETERS (mg/l)																										
NITRATE	0.55	----	0.17	0.86	< 0.1	0.41	0.21	----	----	0.33	< 0.1	0.11	0.13	0.41	----	0.18	0.21	0.11	1.20	0.98	0.28	1.3	< 0.1	1.2	NA	
SULFATE	67.0	7.5	37	98	2.8	134	2.8	2.4	4	6.0	9.3	3.9	26.0	26.0	8.9	3.7	37.0	6.1	12.0	15.0	11	8.0	8.6	7.3	NA	
ALKALINITY	300	310	380	190	400	341	270	350	300	120	360	149	190	250	240	40	290	227	220	260	340	140	280	202	NA	
TOTAL HARDNESS	740	310	350	820	590	330	380	310	230	57	500	180	240	250	180	37	350	220	280	260	270	180	310	240	NA	
AMMONIA	----	0.088	UJ	0.046	0.20	----	----	0.76	0.065J	----	0.75	----	----	0.18	----	----	0.11	----	----	----	UJ	----	<0.03	----	NA	
METHANE	----	8.800	----	0.0076	4.4	0.19	0.100	1.600	----	----	0.28	0.035	0.011	0.011	----	----	0.012	0.0035	----	----	----	----	0.02	<0.0005	NA	
PARAMETERS MEASURED IN THE FIELD																										
FERROUS IRON	----	3.8	0.9	0.8	4.2	1.2	6.1	3.3	2.2	0	2.1	1.7	----	1.200	0	0	1	0.4	----	0.300	0	0	1.7	0.2	NA	
pH	7.06	6.95	8.26	6.96	7.54	6.87	6.92	6.45	6.77	6.3	6.33	6.51	7.30	6.88	8.26	7.16	7.43	6.91	7.12	8.21	6.68	7.04	7.14	6.53	NA	
DISSOLVED OXYGEN	0.00	0.00	0.29	2.28	0.18	0.45	0.00	0.00	2.79	7.99	0.12	1.22	1.15	0.00	0	0.64	0.49	2.93	4.80	0.00	0.77	7.70	0.00	3.23	NA	
OXIDATION REDUCTION POTENTIAL	76	-127	-76	123.9	44.4	42.1	-61	-81	-8	146.6	-71	83.9	43	-113	-46	186.9	44	6.2	146	-50	121	41.6	-109	66	NA	
CONDUCTIVITY	1.120	0.999	1.4	6.794	1.471	1.178	0.531	0.811	0.76	0.106	0.822	0.09	0.366	0.803	0.391	0.067	0.440	0.226	0.391	0.362	0.577	0.377	0.595	0.318	NA	
FIELD OBSERVATIONS	----	----	----	----	---	----	Odor	Odor	Odor	----	---	----	----	----	----	----	---	----	----	----	----	----	---	----	----	

**NOTES:**

- ug/L = Micrograms per liter
- VOCs - volatile organic compounds determined by USEPA Method 8260
- NYSDEC Standards - NYS Division of Water Technical and Operational Guidance Series (1.1.1) 1998
- The MTBE ground water standard is from NYSDEC's TAGM 8086
- Bold white type with black background indicates exceedance of the NYSDEC Standards or Guidance Value
- J = Results greater than the reporting limit that are considered estimated.
- UJ = Results less than the reporting limit that are considered estimated.
- = the compound was not detected at a concentration above the laboratory reporting limit
- Natural Attenuation Parameters are used to characterize the physical, chemical and biological response of a hydrologic system to contamination.
- Dissolved Oxygen, Oxidation Reduction Potential, pH and conductivity were measured in the field using a Horiba U-22 and flow through cell just prior to collecting samples.
- Ferrous Iron concentration were measured using a HACH Test Kit
- Ferrous Iron and DO are reported in mg/L
- pH is reported in standard units
- Oxidation Reduction Potential is reported in mV
- Conductivity is reported in ms/cm
- Odor = "Petroleum-like" odor
- mg/L = Milligrams per liter
- Sheen = Sheen on purge water and/or sample

*Table 2 Final*  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA - 2005 through 2010**  
**SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD**  
**HANCOCK FIELD, SYRACUSE, NY**  
**NYSDEC SITE NUMBER 734054**  
**ERM PROJECT NUMBER 0116255**

WELL ID Sample Date	MW-8						MW-9						MW-11						MW-14						NYSDEC STANDARDS	
	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10		
<b>VOCs (ug/l)</b>																										
BENZENE	---	---	---	---	---	---	---	---	---	---	---	---	<b>32</b>	<b>31</b>	<b>17</b>	---	<b>49</b>	<b>26</b>	<b>3.7</b>	<b>4.5</b>	<b>2</b>	---	<b>3.9</b>	<b>1.7</b>	1	
ETHYL BENZENE	<b>6.4</b>	---	---	---	---	---	---	---	---	---	---	---	---	1.4	0.63J	---	<b>11</b>	<b>7.8</b>	---	1.2	0.22J	---	---	---	5	
TOLUENE	---	---	---	---	NA	NA	---	---	---	---	NA	NA	---	---	0.11J	---	NA	NA	---	---	---	---	NA	NA	5	
XYLENE	4	---	---	---	---	---	---	---	---	---	---	---	---	<b>5.2</b>	0.36J	---	<b>16</b>	<b>9.5</b>	---	---	---	---	---	---	5	
MTBE	---	---	---	---	NA	NA	---	---	---	---	NA	NA	---	2.2	---	---	NA	NA	---	1.9	---	---	NA	NA	10	
<b>NATURAL ATTENUATION PARAMETERS (mg/l)</b>																										
NITRATE	0.20	---	---	1.2	< 0.1	<0.1	0.16	0.37	0.1	0.91	< 0.1	<0.1	0.23	0.15	---	0.34	<0.1	<0.10	0.77	---	---	0.26	<0.1	<0.10	NA	
SULFATE	24.0	28.0	42	8.7	52.0	60.6	38.0	21.0	20	6.1	12.0	24.1	8.8	22.0	22	72	4.5	9.9	24.0	43.0	45	66.0	45.0	56.8	NA	
ALKALINITY	320	320	250	88	400	380	110	200	270	32	260	120	330	330	260	370	360	403	230	320	370	350	340	360	NA	
TOTAL HARDNESS	380	120	370	96	650	560	130	360	83	26	220	100	320	320	370	440	510	570	230	350	380	400	470	440	NA	
AMMONIA	---	---	UJ	---	< 0.03	---	---	0.25	0.12J	0.14	0.37	<2.0	---	---	0.042J	---	<0.03	---	---	---	0.2	---	<0.03	---	NA	
METHANE	0.730	0.015	---	0.0024	0.011	0.032	---	0.020	---	---	---	0.0025	0.006	0.740	---	0.052	1.6	1.9	1.800	0.130	0.039	0.14	0.16	0.13	NA	
<b>PARAMETERS MEASURED IN THE FIELD</b>																										
FERROUS IRON	2.0	2.4	1	0.8	1.2	---	0.1	2.0	1.05	1.1	2.0	0.2	4.0	4.4	1.6	2.5	2.2	2.6	0.5	2.8	NM	1.4	2.0	1.1	NA	
pH	6.94	7.12	4.58	6.29	7.70	7.03	6.27	6.51	6.41	6.64	8.31	6.18	7.38	7.19	4.51	7.29	7.00	0.02	6.96	7.07	7.33	7.13	7.68	7.15	NA	
DISSOLVED OXYGEN	0.00	0.00	10.9	6.21	0.35	0.32	0.00	0.00	0	10.09	3.02	0.85	0.00	0.00	11.36	0.23	0.00	0.36	2.12	0.00	0	0.20	0.15	0.44	NA	
OXIDATION REDUCTION POTENTIAL	-28	-126	271	41	12.8	-97.4	152	-26	0.43	109.9	-144.7	43.8	-271	-155	270	-93.1	-163	-24.9	-14	-137	-121	-50.2	14.7	23.1	NA	
CONDUCTIVITY	0.706	0.999	0	0.172	0.873	0.264	1.270	0.969	0.83	0.137	1.006	0.748	0.643	0.97	0	1.056	1.280	0.504	0.496	0.9	0.91	0.567	0.467	0.196	NA	
<b>FIELD OBSERVATIONS</b>	---	---	---	---	---	---	Odor	Odor	---	---	---	---	Odor	Odor	---	---	Odor	---	Odor	Odor	Odor	Dye	Dye	---	---	---

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Table 2 Final  
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SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD  
HANCOCK FIELD, SYRACUSE, NY  
NYSDEC SITE NUMBER 734054  
ERM PROJECT NUMBER 0116255

WELL ID Sample Date	MW-15						MW-16						MW-17						MW-18						NYSDEC STANDARDS	
	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10		
VOCs (ug/l)																										
BENZENE	100	140	66	6.8	10	5.3	----	----	----	----	----	----	----	----	0.18J	----	----	----	----	----	----	----	----	----	----	1
ETHYL BENZENE	28	33	38	----	11	9.8	----	----	0.25J	----	----	----	----	2	49	----	----	0.95J	----	----	----	----	----	----	----	5
TOLUENE	----	----	----	----	NA	NA	----	----	0.38J	----	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	----	5
XYLENE	3	----	----	----	----	0.72J	----	----	----	----	----	----	----	----	31	----	----	1.2J	----	----	----	----	----	----	----	5
MTBE	----	2.8	----	----	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	----	10
NATURAL ATTENUATION PARAMETERS (mg/l)																										
NITRATE	0.21	----	----	0.8	<0.1	<0.10	0.20	----	0.11	0.48	<0.1	<0.10	3.20	0.13	----	3.3	<0.1	<0.1	1.40	0.34	0.83	0.52	<0.1	0.45	NA	
SULFATE	37.0	17.0	27	28	31	36.5	62.0	37.0	99	63	63	60	58.0	16.0	41	27	19	18.8	13.0	12.0	13	6.0	14.0	15.0	NA	
ALKALINITY	380	340	290	410	340	360	260	350	520	400	370	385	260.0	360.0	320	260	370	382	290	310	320	92	390	396	NA	
TOTAL HARDNESS	430	370	380	460	420	430	450	390	480	530	550	540	300	370	370	260	540	610	300	280	300	99	430	450	NA	
AMMONIA	----	----	0.11J	0.041	<0.03	----	----	----	5.1J	----	<0.03	----	1.50	1.20	0.13J	----	0.22	----	----	----	UJ	----	<0.03	----	NA	
METHANE	2.100	1.400	----	0.93	0.19	0.32	----	0.057	0.0078	----	0.0089	0.012	0.033	1.400	----	----	1.1	1.3	----	----	----	----	0.0029	<0.0005	NA	
PARAMETERS MEASURED IN THE FIELD																										
FERROUS IRON	4.6	3.1	2.95	2.2	2.4	3.2	----	0.400	NM	0.2	0.2	0.00	----	2.200	3.2	0	1.4	1.4	----	0.00	0.00	0.00	0.00	0.00	NA	
pH	7.00	6.88	7.2	7.16	7.55	6.8	7.17	6.99	7.15	6.67	7.60	6.94	7.35	6.83	7.01	6.75	6.69	6.6	7.25	8.10	7.13	7.07	7.49	6.77	NA	
DISSOLVED OXYGEN	0.00	0.00	0	0.31	0.13	0.42	1.70	0.00	0	1.30	0.42	0.84	0.00	0.00	0	6.29	0.00	0.58	0.20	0.00	0	1.06	1.11	3.86	NA	
OXIDATION REDUCTION POTENTIAL	-67	150	-153	-99.1	7.8	-7.1	-85	-16	-19	153.8	18.9	114.8	-308	-139	-98	53.9	-115	-6.5	-202	127	185	181.1	44.5	61.7	NA	
CONDUCTIVITY	1.170	1.01	0.99	0.630	0.525	0	1.050	0.97	3.06	1.052	0.891	0.329	0.62	0.6	0.9	0.522	1.260	0.547	0.486	0.378	0.986	0.143	0.568	0.341	NA	
FIELD OBSERVATIONS	----	----	Odor	----	Odor	----	----	----	----	Dye	Dye	----	----	----	----	----	----	----	----	----	----	----	----	----	----	

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SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD  
HANCOCK FIELD, SYRACUSE, NY  
NYSDEC SITE NUMBER 734054  
ERM PROJECT NUMBER 0116255

WELL ID	MW-19								MW-20						MW-22					NYSDEC STANDARDS	
	Sample Date	Apr-05	Sep-05	Nov-06	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Apr-05	Sep-05	Nov-06	Feb-08		Oct-09
<b>VOCs (ug/l)</b>																					
BENZENE	28	33	17J	----	0.71J	6	< 10	< 6.2	----	----	----	----	----	----	110	70	51	----	5.6	----	1
ETHYL BENZENE	300	610	270	8.5	17	410	380	100	----	----	----	----	----	----	89	32	82	----	21	----	5
TOLUENE	----	----	----	----	NA	NA	NA	NA	----	----	----	----	NA	NA	----	----	0.34J	----	NA	NA	5
XYLENE	650	860	460	9	20	760	420	18	----	----	----	----	----	----	88	46	90	----	3	----	5
MTBE	----	----	----	----	NA	NA	NA	NA	----	----	----	----	NA	NA	----	----	----	----	NA	NA	10
<b>NATURAL ATTENUATION PARAMETERS (mg/l)</b>																					
NITRATE	0.19	----	----	0.28	----	----	<0.1	<0.1	0.45	----	----	1.4	<0.1	<0.1	1.50	----	0.3	1.9	<0.1	0.48	NA
SULFATE	15.0	----	11	25.0	20.0	6.7	4.9	11.2	36.0	15.0	240	11.0	9.4	12.8	32.0	8.8	41	16.0	31.0	37.4	NA
ALKALINITY	350	330	240	410	330	330	340	401	340	340	370	67	350	430	330	400	370	170	410	349	NA
TOTAL HARDNESS	340	350	330	350	400	560	550	610	420	330	300	83	330	440	390	340	340	160	570	420	NA
AMMONIA	----	----	0.75J	----	----	0.077	0.16	----	----	----	0.03J	----	< 0.03	<2.0	----	0.12	0.1	----	<0.03	----	NA
METHANE	3.400	3.500	----	0.99	0.61	0.98	3	1.1	0.018	0.027	----	----	0.13	0.0066	2.300	1.800	1.3	0.017	1.0	0.017	NA
<b>PARAMETERS MEASURED IN THE FIELD</b>																					
FERROUS IRON	----	4.100	2.2	2	1.7	2.7	1.9	----	----	2.500	1.2	0	1.8	0.00	----	5.300	NM	0	0.8	0	NA
pH	6.78	6.68	4.66	6.37	7.1	6.64	8.21	6.72	7.06	6.71	4.69	6.47	7.48	6.73	6.87	7.81	5.19	6.57	6.85	6.63	NA
DISSOLVED OXYGEN	0.00	0.00	10.95	0.88	0.71	0.29	0.21	0.45	0.00	0.00	11.17	0.26	0.23	0.61	5.70	0.00	9.55	0.16	0.00	1.87	NA
OXIDATION REDUCTION POTENTIAL	-79	-101	267	23.7	11.6	-33.4	-132.6	-66	-390	-76	261	207.5	-50.1	8.9	-242	-92	226	174.9	-25	-17.7	NA
CONDUCTIVITY	1.210	0.91	0	1.260	0.997	1.052	1.450	0.183	0.839	0.954	0	0.143	0.807	0.554	0.607	1.07	0	0.155	1.410	0.365	NA
FIELD OBSERVATIONS	----	----	----	----	----	Odor	----	----	----	----	----	----	----	----	Odor	Odor	----	Odor	----	----	----

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SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD  
HANCOCK FIELD, SYRACUSE, NY  
NYSDEC SITE NUMBER 734054  
ERM PROJECT NUMBER 0116255

WELL ID Sample Date	RW-1						MW-101				MW-102				MW-103				MW-104				NYSDEC STANDARDS
	Apr-05	Sep-05	Nov-06	Feb-08	Oct-09	Oct-10	Nov-06	Feb-08	Oct-09	Oct-10	Nov-06	Feb-08	Oct-09	Oct-10	Nov-06	Feb-08	Oct-09	Oct-10	Nov-06	Feb-08	Oct-09	Oct-10	
VOCs (ug/l)																							
BENZENE	---	2.4	1.4J	---	---	---	8.9	---	---	---	---	---	---	---	---	1.3	---	---	---	---	---	---	1
ETHYL BENZENE	11.0	18	60	45	---	3.8	110	22	7.9	3.2	---	---	---	---	---	---	0.24J	---	---	---	---	5	
TOLUENE	---	---	0.4J	---	NA	NA	---	---	NA	NA	---	---	NA	NA	---	---	NA	NA	---	---	NA	NA	5
XYLENE	21.0	36.0	30	60	---	2.8	230	41	7.4	2.0	---	---	---	---	---	---	---	---	---	---	---	5	
MTBE	---	---	---	---	NA	NA	---	---	NA	NA	---	---	NA	NA	---	---	NA	NA	---	---	NA	NA	10
NATURAL ATTENUATION PARAMETERS (mg/l)																							
NITRATE	0.12	---	---	0.18	<0.1	<0.10	0.72	0.47	<0.1	0.08B	0.13	0.42	<0.1	0.08B	0.34	0.32	<0.1	<0.1	0.38	0.3	<0.1	0.45	NA
SULFATE	13.0	19.0	170	6.7	5	5.7	44	35	42	51.6	50	52	5	66.4	27	36	33	38.4	39	4.5	41	46.9	NA
ALKALINITY	200	310	310	250	310	292	380	300	360	342	410	390	340	365	250	340	330	383	330	54	370	344	NA
TOTAL HARDNESS	240.0	310.0	380	280	430	460	430	420	490	530	550	520	640	740	310	360	510	730	440	22	500	490	NA
AMMONIA	0.45	0.34	1.1	0.44	0.82	1.1B	0.12	---	<0.03	---	UJ	---	<0.03	---	---	---	<0.03	<2.0	0.13	0.34	<0.03	<2.0	NA
METHANE	1.300	1.300	6.3	4.4	1.3	1.50E	0.63	0.55	0.44	0.091	0.026	0.016	0.0084	0.02	0.27	0.90	0.0970	0.28	0.055	---	0.033	0.014	NA
PARAMETERS MEASURED IN THE FIELD																							
FERROUS IRON	1.0	3.2	NM	1.3	2.5	1.0	2.8	1.6	1.2	1.6	0.6	0.4	1.8	1.6	1.2	0.9	2.9	1.8	0.2	0.0	2.1	0.4	NA
pH	7.11	7.01	6.8	6.90	6.83	7.07	5.15	7.82	6.98	7.08	4.89	6.93	7.40	6.96	4.65	7.12	6.82	7.01	7.27	6.99	7.55	7.01	NA
DISSOLVED OXYGEN	0.00	0.00	0	0.13	0.00	0.46	9.84	0.50	0.00	0.58	9.9	0.72	0.16	0.45	10.92	0.33	0.00	0.51	0	12.38	0.28	1.75	NA
OXIDATION REDUCTION POTENTIAL	-129	-166	-200	-248.8	-156	-145.8	238	-35.2	-103	-5.5	267	46.3	46.8	30.7	275	-48.9	-132	3.3	-51	112.3	-70.5	25.9	NA
CONDUCTIVITY	0.605	0.999	12.1	0.666	1.100	0.652	0	0.731	1.280	0.554	0	1.459	1.532	0.819	0	1.776	1.420	0.964	1.49	0.034	1.674	1.188	NA
FIELD OBSERVATIONS	O/S	Odor	Odor	O/S	Dye /Odor	---	O/S	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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**SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD**  
**HANCOCK FIELD, SYRACUSE, NY**  
**NYSDEC SITE NUMBER 734054**  
**ERM PROJECT NUMBER 0116255**

WELL ID	MW-105						MW-106						MW-107						NYSDEC STANDARDS
	Nov-06	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10	Nov-06	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10	Nov-06	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10	
<b>VOCs (ug/l)</b>																			
BENZENE	110	86	6.2	3.3	16	5.5	----	----	----	----	----	----	0.52J	----	----	----	----	----	1
ETHYL BENZENE	300	260	120	----	8.6	97	----	----	----	----	----	----	30	----	----	----	----	----	5
TOLUENE	----	----	NA	NA	NA	NA	----	----	NA	NA	NA	NA	----	----	NA	NA	NA	NA	5
XYLENE	480	430	260	----	14	92	----	----	----	----	----	----	0.41J	----	0.27 J	----	----	----	5
MTBE	----	----	NA	NA	NA	NA	0.34J	----	NA	NA	NA	NA	----	----	NA	NA	NA	NA	10
<b>NATURAL ATTENUATION PARAMETERS (mg/l)</b>																			
NITRATE	0.11	0.29	0.21	----	<0.1	<0.1	----	0.12	----	----	<0.1	<0.1	1.1	2.6	2.1	0.41	0.54	2.8	NA
SULFATE	6.3	5.6	8.1	25	14	13.8	28	42	49	48	36	45.3	17	12	15	45	42	23.8	NA
ALKALINITY	270	420	380	320	360	379	420	340	390	340	340	369	290	100	200	190	180	155	NA
TOTAL HARDNESS	370	320	370	370	460	470	430	410	450	550	380	490	360	120	200	510	330	290	NA
AMMONIA	0.054	----	----	----	<0.03	0.84B	UJ	----	----	----	<0.03	<2.0	0.099	----	----	----	<0.03	<2.0	NA
METHANE	3.3	7.8	2.8	1.5	0.51	3.9	0.14	0.07	0.051	0.28	0.045	0.091	0.29	----	0.0049	0.033	0.057	0.017	NA
<b>PARAMETERS MEASURED IN THE FIELD</b>																			
FERROUS IRON	2.2	1.1	3.5	0.8	2.9	2.0	0	0.0	0.8	0.0	0.0	0.4	1.6	0.0	0.0	5.2	3.5	0.2	NA
pH	4.64	6.97	7.39	7.21	7.77	7.28	7.32	7.35	6.97	7.53	7.38	7.31	5	6.88	6.92	7.62	7.49	6.73	NA
DISSOLVED OXYGEN	11.09	0.38	0.29	2.95	0.38	0.68	0	0.19	0.23	0.26	0.14	0.68	10.45	7.57	4.89	2.57	2.24	2.57	NA
OXIDATION REDUCTION POTENTIAL	272	-66.1	-43.1	86.1	-107.1	2.6	-20	-58.7	-5.3	10.1	-6.0	30.3	255	99.8	21.4	-21.7	-17.7	34.2	NA
CONDUCTIVITY	0	0.567	817	0.956	1.128	1.165	1.66	0.558	1.404	0.850	0.854	0.641	0	0.490	0.845	0.915	1.238	0.552	NA
FIELD OBSERVATIONS	O/S	Odor	Odor	Oxidant	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

**NOTES:**

ug/L = Micrograms per liter

VOCs - volatile organic compounds determined by USEPA Method 8260

NYSDEC Standards - NYS Division of Water Technical and Operational Guidance Series (1.1.1) 1998

The MTBE ground water standard is from NYSDEC's TAGM 8086

- Bold white type with black background indicates exceedance of the NYSDEC Standards or Guidance Value

J = Results greater than the reporting limit that are considered estimated.

UJ= Results less than the reporting limit that are considered estimated.

---- = the compound was not detected at a concentration above the laboratory reporting limit

Natural Attenuation Parameters are used to characterize the physical, chemical and biological response of a hydrologic system to contamination.

Dissolved Oxygen, Oxidation Reduction Potential, pH and conductivity were measured in the field using a Horiba U-22 and flow through cell just prior to collecting samples.

Ferrous Iron concentration were measured using a HACH Test Kit

Ferrous Iron and DO are reported in mg/L

pH is reported in standard units

Oxidation Reduction Potential is reported in mV

Conductivity is reported in ms/cm

Odor = "Petroleum-like" odor

mg/L= Milligrams per liter

O/S= Oil and/or Sheen on purge water and/or sample



Table 2 Final  
SUMMARY OF GROUNDWATER ANALYTICAL DATA - 2005 through 2010  
SITE 15- 174th FIGHTER WING AIR NATIONAL GUARD  
HANCOCK FIELD, SYRACUSE, NY  
NYSDEC SITE NUMBER 734054  
ERM PROJECT NUMBER 0116255

WELL ID Sample Date	MW-108			MW-109			MW-110			MW-111					MW-112					MW-113			MW-114			NYSDEC STANDARDS
	Feb-08	Oct-09	Oct-10	Feb-08	Oct-09	Oct-10	Feb-08	Oct-09	Oct-10	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10	Feb-08	Apr-09	Aug-09	Oct-09	Oct-10	Feb-08	Oct-09	Oct-10	Feb-08	Oct-09	Oct-10	
VOCs (ug/l)																										
BENZENE	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13	6.9	< 10	0.36J	----	----	----	----	----	----	1
ETHYL BENZENE	----	----	----	----	----	----	----	----	----	----	----	----	----	----	410	250	300	48	10	----	----	----	----	----	----	5
TOLUENE	----	NA	NA	----	NA	NA	----	NA	NA	----	NA	NA	NA	NA	----	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5
XYLENE	----	----	----	----	----	----	----	----	----	----	----	----	----	----	740	480	170	<20	2.7	----	----	----	----	----	----	5
MTBE	----	NA	NA	----	NA	NA	----	NA	NA	----	NA	NA	NA	NA	----	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10
NATURAL ATTENUATION PARAMETERS (mg/l)																										
NITRATE	0.39	<0.1	0.17	0.66	<0.1	1.4	----	<0.1	<0.1	----	----	----	<0.1	<0.1	----	----	----	1.4	<0.1	----	<0.1	<0.1	----	<0.1	<0.1	NA
SULFATE	41	44	45.8	70	65	79.8	41	57	59.9	65	45	48	49	57.4	19	11	11	8.4	38.8	11	62	65.2	11	56	55.9	NA
ALKALINITY	400	380	398	410	340	402	370	380	366	350	360	330	360	383	370	360	330	340	329	330	470	350	330	350	330	NA
TOTAL HARDNESS	510	540	700	460	420	510	450	570	570	410	490	600	540	520	380	570	530	510	440	530	540	550	530	400	630	NA
AMMONIA	<0.03	<0.03	----	<0.03	<0.03	----	----	<0.03	<2.0	----	----	----	<0.03	<2.0	----	----	----	0.051	<2.0	----	<0.03	<2.0	----	<0.03	<2.0	NA
METHANE	0.018	0.0082	0.012	0.28	0.0078	0.097	0.048	0.061	0.18	0.044	0.040	0.051	0.039	0.21	7.2	3	1.6	1.4	0.68	1.6	0.021	0.028	1.6	0.0044	0.0013	NA
PARAMETERS MEASURED IN THE FIELD																										
FERROUS IRON	1.6	1.2	0.0	0.0	0.2	0.0	0.4	0.0	0.4	0.0	0.0	0.2	0.0	0.0	1.3	2.1	2.2	0.0	3.4	1.7	1.5	1.8	1.8	1.4	1.7	NA
pH	6.92	6.93	6.92	6.95	7.49	6.84	7.14	7.54	7.16	7.23	7.34	7.24	7.21	6.96	7.25	8.30	6.57	7.33	7.36	7.06	7.19	7.23	6.90	7.12	7.16	NA
DISSOLVED OXYGEN	0.39	0	0.71	0.04	0.68	0.77	0.11	0.17	0.50	0.10	0.28	0.33	0.15	0.69	0.42	0.16	0.37	0.26	0.82	0.30	0.00	0.46	0.14	0.00	0.39	NA
OXIDATION REDUCTION POTENTIAL	27.6	-61	45	162.5	59.1	112.2	0.4	30.7	25.3	14.7	22.3	28.8	27.9	-35.7	-110.2	-74.6	-71.3	21.5	-106.9	-57.8	-42.7	26.9	-43.3	-112	29.8	NA
CONDUCTIVITY	1.033	2.16	0.649	1.269	1.458	0.517	0.970	1.311	1.013	0.725	0.848	1.199	1.750	0.248	0.599	0.855	15.890	1.481	0.210	1.349	1.863	0.780	1.055	1.38	0.80	NA
FIELD OBSERVATIONS	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Odor	Odor	Odor	Odor	----	----	----	----	artesian	artesian	artesian	----

**NOTES:**

- ug/L = Micrograms per liter
- VOCs - volatile organic compounds determined by USEPA Method 8260
- NYSDEC Standards - NYS Division of Water Technical and Operational Guidance Series (1.1.1) 1998
- The MTBE ground water standard is from NYSDEC's TAGM 8086
- Bold white type with black background indicates exceedance of the NYSDEC Standards or Guidance Value
- J = Results greater than the reporting limit that are considered estimated.
- UJ= Results less than the reporting limit that are considered estimated.
- = the compound was not detected at a concentration above the laboratory reporting limit
- Natural Attenuation Parameters are used to characterize the physical, chemical and biological response of a hydrologic system to contamination.
- Dissolved Oxygen, Oxidation Reduction Potential, pH and conductivity were measured in the field using a Horiba U-22 and flow through cell just prior to collecting samples.
- Ferrous Iron concentration were measured using a HACH Test Kit
- Ferrous Iron and DO are reported in mg/L
- pH is reported in standard units
- Oxidation Reduction Potential is reported in mV
- Conductivity is reported in ms/cm
- Odor = "Petroleum-like" odor
- mg/L= Milligrams per liter
- Sheen= Sheen on purge water and/or sample

Table 3 Final  
SUMMARY OF INDOOR AIR EVALUATION DATA- RAMTECH ENGINEERS BUILDING  
HANCOCK AIR NATIONAL GUARD BASE- SYRACUSE, NEW YORK  
NYSDEC SITE NUMBER 734054  
ERM PROJECT NUMBER 0116255

Sample Identification	Sample Date	Air Guideline Values	Indoor Air 90th Pctl	10 January 2011 24-Hour Active Sampling					7 February 2011 24-Hour Active Sampling					Passive Sampling 2-7-2011 through 3/8/2011	
				Indoor Air	Indoor Air Dup	Sub-Slab	Sub-Slab Dup	Outdoor Air	Indoor Air	Indoor Air Dup	Sub-Slab	Sub-Slab Dup	Outdoor Air	Indoor Air	Indoor Air Dup
<b>Potential Petroleum Related Compounds (ug/m<sup>3</sup>)</b>															
Benzene	NA	15	0.77 B	0.74	0.34 B	0.27 B	0.61 B	----	0.81	0.50	----	0.73	1.04	1.02	
Cyclohexane	NA	8.1	3.52	2.55	0.76	0.36	0.18	----	0.76	0.12	----	0.07	1.47	1.36	
1,2-Dibromoethane	NA	<0.25	0.05	----	----	----	----	----	----	----	----	----	----	----	
Ethylbenzene	NA	7.3	0.25	0.28	0.51	0.20	0.09	----	0.43	3.34	1.31	0.15	0.55	0.50	
Isopropylbenzene	NA	0.9	0.04	0.06	----	----	----	----	0.07 J	----	0.06 J	----	0.11	0.10	
Methylcyclohexane	NA	6.4	3.62	3.28	0.91	0.51	0.27	----	0.41	0.13	----	0.21	1.64	1.39	
Toluene	NA	58	1.31	1.19	0.57 J	0.39	0.43 J	----	1.61 B	1.08 B	0.44 B	0.66 B	3.10	2.56	
o- Xylene	NA	7.6	0.22	0.25	0.12	0.06	0.10	----	0.46	----	0.28	0.15	0.79	0.68	
m,p- Xylenes	NA	12	0.53	0.27	0.20	0.10	0.11	----	1.06	1.25	----	0.39	1.10	0.95	
<b>Non-Petroleum Related Compounds (ug/m<sup>3</sup>)</b>															
Bromoform	NA	NA	----	----	----	----	----	----	----	----	----	0.04 R	----	----	
Bromodichloromethane	NA	NA	0.04	0.03	----	----	----	----	----	----	----	----	----	----	
Carbon tetrachloride	Matrix 1	0.8	0.72	0.73	3.53	----	0.69	----	0.27	----	----	0.25	----	----	
Chloroform	NA	1.4	0.25	0.26	0.05	0.11	0.07	----	0.18	0.17	0.36	0.06	0.17	0.17	
1,2-Dibromo-3-chloropropane	NA	NA	----	0.03	0.20	----	----	----	----	----	----	----	----	----	
1,2-Dichloroethane	NA	<0.25	0.10	0.11	----	----	0.08	----	0.08	----	----	0.05	0.10	0.09	
trans-1,2-Dichloroethene	NA	NA	---- J	----	0.43	0.16	----	----	----	----	----	----	----	----	
1,2-Dichloropropane	NA	NA	0.03	----	----	---- J	----	----	----	----	----	----	----	----	
trans-1,2-Dichloropropene	NA	NA	----	----	0.08	----	0.05	----	----	----	----	----	----	----	
1,3- Dichlorobenzene	NA	0.6	0.13	----	----	----	----	----	----	----	0.08 R	----	----	----	
1,4-Dichlorobenzene	NA	1.3	0.12	0.15	0.04	----	----	----	0.15 R	0.22	0.08 R	----	----	----	
Methyl acetate	NA	NA	0.10 B	0.13	----	0.08 B	0.06 B	----	----	----	0.58	----	0.22	0.17	
Styrene	NA	1.3	0.30	0.99	2.12	1.49	0.15	----	0.51 J	3.60 J	1.12 J	----	----	----	
Tetrachloroethene	100	2.9	0.38	0.36	0.14	0.10	0.06	----	0.22	----	----	0.11	0.27	0.25	
1,1,1-Trichloroethane	Matrix 2	3.1	0.40	0.44	0.29	0.07	0.04	----	0.21	----	0.29	0.04	1.55	1.42	
1,1,2- Trichloroethane	NA	<0.25	0.45	----	----	----	----	----	----	----	----	----	----	----	
Trichloroethene	5	0.5	0.03	0.04	----	----	0.03	----	----	----	----	0.09 R	0.31	0.27	
1,1,2- Trichlorotrifluoroethane	NA	1.8	2.10 J	2.47	1.31 J	0.34 J	2.11 J	----	0.74	0.81	0.03	0.75	----	----	

**NOTES:**

- Only analytes detected above the laboratory reporting limits are summarized in this table.

Air Guideline Values - Final NYSDOH CEH BEEI Soil Vapor Intrusion Guidance - October 2006 - Table 3.1; Matrix 1 and Matrix 2

The concentrations within this column present the 90th percentile of the data group used in the NYSDOH's background volatile organic compounds study.

Indoor Air 90th Pctl - The NYSDOH published a database statistically evaluating the concentration of select analytes collected in indoor air samples in their *Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes* (NYSDOH 2003).

The concentrations within this column present the 90th percentile of the data group used in the NYSDOH's background volatile organic compounds study.

= the compound was not detected at a concentration above the laboratory reporting limit

J = Analyte was positively identified at a concentration greater than or equal to the reporting limit, the associated concentration is considered an estimate.

B = Analyte was identified in the method blank at a concentration of 1 nanogram.

R = Reject analyte results due to continuing calibration, percent difference values >90%. In these cases the initial calibration RSDs were acceptable for all analytes.

Concentration highlighted in red are the result of adding the resulting concentration of the primary and secondary sorbent tubes.

Section 10.8.1.3 of TO-17 defines breakthrough as when 5% or more of the concentration of one or more analytes detected in the primary tube is detected in the back up tube.

When break through occurs between 5% and 66% the sum of the concentrations will be reported.

Concentration highlighted in blue are the result of averaging the resulting concentration of the primary and secondary sorbent tubes.

TO-17 defines a safe sample volume as 2/3 or 66%, if a concentration in the secondary tube is greater than 66% of the amount found

on the primary tube, this is evidence of a non-linear sampling effect, and the front and back tube values are averaged.

*APPENDIX A*  
*LOW-FLOW DATA SHEETS*

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# LOW FLOW DATA SHEET

Well ID: MW-2

Date: 10/4/2010

Project Name: ANG Hancock Field

Project Number: 0116255

Weather Conditions: overcast, dry rain  $\pm$  50°F

Pump Used  
Peristaltic Pump  
YSE SSC with flow cell

Static water level before lowflow: 10.02 (feet below top of casing)

Bottom of well: 13.42 (feet below top of casing)

Time Started: 1615

Time Finished: 1715

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1630	10.22	on	22.4	15.18	6.96	999	1.27	~ 150	44.2	
1635	10.45		NM	15.88	6.88	1066	0.86		43.4	
1640	10.65			16.61	6.87	1110	0.56		42.7	
1645	10.74			16.81	6.84	1143	0.49		43.2	
1650	10.76			16.88	6.85	1168	0.46		42.6	
1655	10.76		13.7	17.02	6.86	1174	0.45		42.5	
1700	10.76	off	9.02	17.10	6.87	1178	0.45		42.1	

Notes: Fezt = 1.2

Sample ID: ANG-MW-2 (10/2010)

Sample Time: 1705

Total Vol. Purged: 1.5 Gallons

Samplers Initials: SP

# LOW FLOW DATA SHEET

Well ID: MW-3      Date: 10/5/2010      Project Name: ANG Hancock Field      Project Number: 0116255

Pump Used  
Peristaltic Pump  
YSE SSC with flow cell

Weather Conditions: SSS, overcast, light rain, calm

Static water level before lowflow: 12.04 (feet below top of casing)  
 Bottom of well: \_\_\_\_\_ (feet below top of casing)

Time Started: \_\_\_\_\_      Time Finished: \_\_\_\_\_

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
12:44	10.94	ON	2.87	13.92	7.46	0.096	2.84	150	88.6	
12:48	11.62	ON	0.37	13.88	6.66	0.091	1.46	100	93.4	
12:54	12.02	ON	0.08	13.84	6.57	0.089	1.24	100	91.5	
12:58	12.33	ON	0.00	13.85	6.54	0.088	1.19	100	88.7	
13:04	12	ON	0.00	13.90	6.51	0.090	1.22	100	83.9	

Notes: Ferrous Iron: 1.7 mg/l

Sample ID: ANG-MW-3 (10/2010)

Sample Time: 13:10

Total Vol. Purged: 20.5 Gallons

Samplers Initials: RS

# LOW FLOW DATA SHEET

Well ID: MW-4 Date: 10/5/2010 Project Name: ANG Hencock field Project Number: 0116255

Weather Conditions: overcast, rain ± 50°F

Static water level before lowflow: 9.65 (feet below top of casing)  
 Bottom of well: 18.60 (feet below top of casing)

Pump Used  
 Paristatic Pump Flow cal  
 YSE SSC with Flow cal

Time Started: 1230 Time Finished: \_\_\_\_\_

Time	DIW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm <sup>2</sup>	DO mg/L	Flow ml/min.	ORP mv	Comments
—	—	—	+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1250	11.01	on	4.11	13.95	7.15	251	3.84	~ 200	8.7	
1255	11.50		NM	13.98	7.06	245	3.59		8.0	
1300	11.90			14.02	6.99	239	3.44		8.1	
1305	12.27			14.02	6.95	233	3.43		7.3	
1310	12.49		4	14.03	6.93	230	3.16		4.5	
1315	12.65		4.32	14.02	6.92	228	3.07		4.2	
1320	12.81	4	3.92	14.00	6.91	226	2.93		4.2	

Notes: FL<sup>24</sup> = 0.4

Sample ID: ANG-MW-4 (10/2010)  
 Sample Time: 1325  
 Total Vol. Purged: 2 Gallons  
 Samplers Initials: SP

# LOW FLOW DATA SHEET

Well ID: MW-S

Date: 10/4/2010

Project Name: ANG Hancock Field

Project Number: 0116255

Weather Conditions: overcast, dry ± 55°F

Pump Used  
Peristaltic Pump Flowcal  
YSE SSC with Flowcal

Static water level before lowflow: 3.07 (feet below top of casing)

Bottom of well: 14.02 (feet below top of casing)

Time Started: 1045

Time Finished: 1120

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm <sup>3</sup>	DO mg/L	Flow ml/min.	ORP mv	Comments
-	-	-	+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1035	3.51	on	0.0	16.64	7.03	401	4.55	~150	70.4	
1040	3.59		0.0	16.55	6.67	360	3.47		69.0	
1045	3.59			16.57	6.61	346	3.27		71.8	
1050	3.61			16.63	6.56	335	3.16		72.1	
1055	3.61		0	16.61	6.52	326	3.10		71.1	
1100	3.60	0	0.0	16.44	6.53	318	3.23	0	66.0	

Notes: Fe<sup>2+</sup> = 0.2  
 Sample ID: ANG-MW-S (10/2010)  
 Sample Time: 1105  
 Total Vol. Purged: 1.5 Gallons  
 Samplers Initials: SP

# LOW FLOW DATA SHEET

Well ID: MW-8      Date: 10/5/2010      Project Name: ANG Hancock field      Project Number: 0116255

Pump Used  
*Peristaltic Pump  
YSE SSG with flow cell!*

Weather Conditions: ±SSof, overcast, calm

Static water level before lowflow: 8.90 (feet below top of casing)  
Bottom of well: \_\_\_\_\_ (feet below top of casing)

Time Started: \_\_\_\_\_ Time Finished: \_\_\_\_\_

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
15:12	9.01	ON	23.6	13.41	6.87	0.242	3.12	100	-53.0	
15:17	9.01	ON	14.7	13.36	7.00	0.249	0.38	100	-86.5	
15:22	9.01	ON	10.18	13.37	7.02	0.251	0.35	100	-93.7	
15:27	9.01	ON	9.97	13.39	7.03	0.254	0.35	100	-96.4	
15:32	9.02	ON	10.04	13.42	7.03	0.257	0.34	100	-97.7	
15:37	9.02	ON	9.99	13.43	7.03	0.264	0.32	100	-97.4	

Notes: Farraus icon: 5 mg/l      Sample ID: ANG-MW-8 (10/2010)

Sample Time: 15:40

Total Vol. Purged: ~0.5 Gallons

Samplers Initials: R.S.



# LOW FLOW DATA SHEET

Well ID: MW-9      Date: 10/12/2010      Project Name: ANG Hancock field      Project Number: 0116255

Pump Used  
 Peristaltic Pump  
 YSE SSC with flow cell

Weather Conditions: ±SScf, overcast, calm

Static water level before lowflow: 7.14 (feet below top of casing)  
 Bottom of well: 13.55 (feet below top of casing)

Time Started: 10:28      Time Finished: \_\_\_\_\_

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH	Cond. us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
10:32	7.81	on	19.4	13.74	7.01	887	2.91	125	15.8	
10:37	7.86	on	11.2	13.81	6.37	823	2.39	100	18.0	
10:42	8.23	on	9.46	13.85	6.29	810	2.35	100	17.8	
10:50	9.64	on	9.58	13.70	6.21	791	1.72	100	26.8	
10:55	9.03	on	3.44	13.72	6.20	779	1.24	100	30.8	
11:00	9.52	on	3.82	13.71	6.19	769	1.03	100	41.2	
11:05	9.98	on	3.91	13.78	6.18	760	0.93	100	45.3	
11:10	10.39	on	3.88	13.81	6.19	755	0.83	100	46.4	
11:15	10.74	on	3.81	13.88	6.17	752	0.83	100	45.4	
11:20	11.02	on	3.79	13.93	6.18	748	0.85	100	43.8	

Notes: Ferrrous Iron: 0.2 mg/l      Sample ID: ANG-MW-9 (10/2010)

Sample Time: 11:23      Total Vol. Purged: ~0.5 Gallons

Samplers Initials: RS





# LOW FLOW DATA SHEET

Well ID: MW-15      Date: 10/5/2010      Project Name: ANG Hancock Field      Project Number: 0116255

Weather Conditions: overcast, dry ± 50°F

Pump Used  
Peristaltic Pump  
YSI SSC with flow cell

Static water level before lowflow: 12.69 (feet below top of casing)  
Bottom of well: 17.75 (feet below top of casing)

Time Started: 1500      Time Finished: 1555

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm <sup>3</sup>	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1515	12.73	on	23.4	13.07	6.67	429	2.46	~150	10.6	
1520	12.73		22.3	13.00	6.58	428	1.52		3.8	
1525	12.73		NM	12.88	6.60	427	0.99		-0.9	turbidity meter
1530	12.80		NM	12.80	6.62	424	0.85		-1.6	not functioning.
1535	12.81		NM	12.68	6.70	421	0.52		-3.3	
1540	12.81		NM	12.61	6.77	415	0.43		-7.4	
1545	12.81		NM	12.58	6.80	414	0.42		-7.1	
			±							

Notes: Fez = 3.2

Sample ID: ANG-MW-15 (10/2010)

Sample Time: 1550

Total Vol. Purged: 1.5 Gallons

Samplers Initials: SP











# LOW FLOW DATA SHEET

Well ID: MW-20      Date: 10/12/2010      Project Name: ANG Hencock field      Project Number: 0116255

Pump Used  
Peristaltic Pump  
YSE SSC with flow cell

Weather Conditions: 160°F overcast calm

Static water level before lowflow: 7.76 (feet below top of casing)  
 Bottom of well: 14.53 (feet below top of casing)

Time Started: 11:50      Time Finished: \_\_\_\_\_

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
11:52	7.86	ON	11.3	13.69	6.93	648	4.25	100	124.8	
11:57	7.89	ON	8.32	13.23	6.79	573	2.54	100	34.2	
12:02	7.92	ON	4.14	13.12	6.70	579	1.28	100	31.7	
12:07	7.91	ON	2.02	13.45	6.70	570	0.89	100	22.7	
12:12	7.91	ON	1.94	13.49	6.70	569	0.84	100	18.0	
12:17	7.92	ON	1.80	13.54	6.71	564	0.70	100	12.4	
12:22	7.92	ON	1.73	13.58	6.72	561	0.66	100	9.0	
12:27	7.92	ON	1.62	13.56	6.73	558	0.60	100	9.2	
12:32	7.93	ON	1.59	13.49	6.73	554	0.61	100	8.9	

Notes: Ferraris read 0.0 mg/l      Sample ID: ANG-MW-20 (10/2010)

Sample Time: 12:35      Total Vol. Purged: ~0.5 Gallons

Samplers Initials: RS

# LOW FLOW DATA SHEET

Well ID: MW-22 Date: 10/5/2010 Project Name: AMG Henneck Field Project Number: 0116255

Weather Conditions: overcast, rain ± 55°F

Pump Used  
Peristaltic Pump  
YSI 550 with flow cell

Static water level before lowflow: 10.25 (feet below top of casing)  
Bottom of well: 17.19 (feet below top of casing)

Time Started: 0930 Time Finished: 1025

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm <sup>3</sup>	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
0940	11.29	on	3.86	13.01	6.83	399	4.00	~200	-29.3	
0945	11.31		NM	12.98	6.72	380	3.28		-26.9	
0950	11.32			12.91	6.69	371	3.10		-24.7	
0955	11.32			12.93	6.66	366	2.62		-22.4	
1000	11.33			12.98	6.65	363	2.29		-20.3	
1005	11.33		1.91	13.04	6.64	365	1.92		-17.9	
1010	11.33		1.76	13.05	6.63	365	1.87		-17.7	

Notes: FE 27 = 0.0 Sample ID: AMG-MW-22(10/2010)  
 Sample Time: 1015  
 Total Vol. Purged: 2 Gallons  
 Samplers Initials: SP



# LOW FLOW DATA SHEET

Well ID: MW-102      Date: 10/4/2010      Project Name: AWG Henneback Field      Project Number: 0116255

Weather Conditions: Overcast, rain ± 50°F

Pump Used  
Peristaltic Pump with Flow cal  
YSI SSC with Flow cal

Static water level before lowflow: 9.55 (feet below top of casing)  
 Bottom of well: 22.48 (feet below top of casing)

Time Started: 1510      Time Finished: 1610

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm <sup>3</sup>	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1525	9.55	on	112	14.54	7.04	820	1.31	~200	39.3	
1530	9.55		112	14.55	7.03	836	0.80		38.4	
1535	9.57		100.3	14.25	7.01	806	0.61		36.4	
1540	9.57		82.7	14.19	6.98	805	0.52		33.4	
1545	9.56		76.4	14.19	6.98	812	0.52		33.3	
1550	9.57		NM	14.11	6.97	815	0.46		32.2	
1555	9.57		NM	14.14	6.97	818	0.44		30.9	
1600	9.56	off	74.2	14.14	6.96	819	0.45	4	30.7	

Notes: Fe<sup>2+</sup> = 1.0      Sample ID: AWG-MM-102(10/2010)

brg. color      Sample Time: 1.05

Total Vol. Purged: 2.0 Gallons

Samplers Initials: SP



# LOW FLOW DATA SHEET

Well ID: MW-104      Date: 10/13/2010      Project Name: ANG Hancock field      Project Number: 0116255

Weather Conditions: Clear dry ± 55°F

Pump Used  
 Peristaltic Pump  
 YSE SSC with flow cell

Static water level before lowflow: 6.56 (feet below top of casing)  
 Bottom of well: 24.35 (feet below top of casing)

Time Started: 1110      Time Finished: 1215

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH	Cond. <sup>3</sup> us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1125	6.59	on	NM	15.16	6.97	696	7.01	~200	35.9	
1130	6.59			15.06	6.95	929	3.97		33.0	
1135	6.59			15.00	6.98	1031	2.76		31.4	
1140	6.58			15.00	6.99	1087	2.29		29.8	
1145	6.58			15.01	7.00	1170	2.01		28.5	
1150	6.59			15.02	7.01	1148	1.93		27.6	
1155	6.59			15.11	7.01	1176	1.79		26.5	
1200	6.59			15.09	7.01	1188	1.75		25.9	

Notes: Fe<sup>2+</sup> = 0.4

Turb meter not working

Sample ID: ANG-MW-104(10/2010)  
 Sample Time: 1205  
 Total Vol. Purged: 2.5 Gallons  
 Samplers Initials: SP









# LOW FLOW DATA SHEET

Well ID: MW-108      Date: 10/4/2010      Project Name: ANG Henckes field      Project Number: 0116255

Pump Used  
Peristaltic Pump  
YSE SSC with flow cell

Weather Conditions: overcast, rain, ± 55°F

Static water level before lowflow: 9.40 (feet below top of casing)  
Bottom of well: 19.54 (feet below top of casing)

Time Started: 1335      Time Finished: 1500

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH	Cond. us/cm <sup>3</sup>	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
1350	9.51	on	49.5	15.20	7.24	585	3.25	~150	72.1	
1355	9.52		43.1	14.99	7.03	636	1.56		58.1	
1400	9.51		24.5	14.94	6.93	644	1.07		54.2	
1405	9.51		NM	14.85	6.79	648	0.92		49.5	
1410	9.51			14.57	6.94	646	0.80		48.1	
1415	9.51			14.58	6.92	647	0.72		46.4	
1420	9.51		0.0	14.52	6.92	649	0.71		45.4	

Notes: Felt 0.0      Sample ID: ANG-MW-108(10/2010)  
 Sample Time: 1425  
 Total Vol. Purged: 1.5 Gallons  
 Samplers Initials: SP

# LOW FLOW DATA SHEET

Well ID: MW-109      Date: 10/4/2010      Project Name: ANG Hancock field      Project Number: 0116255

Pump Used  
Peristaltic Pump  
VSE SSC with flow cell

Weather Conditions: ±50% overcast, drizzle

Static water level before lowflow: 9.71 (feet below top of casing)  
Bottom of well: \_\_\_\_\_ (feet below top of casing)

Time Started: 15:20      Time Finished: \_\_\_\_\_

Time	DTW feet	Pump (on/off)	Turb. NTU	Temp. deg. C	pH SU	Cond. us/cm	DO mg/L	Flow ml/min.	ORP mv	Comments
			+/- 10%	+/- 3%	0.1 unit	+/- 3%	+/- 10%	100-400	+/- 10 mv	
15:24	9.83	on	0.00	16.44	6.63	0.583	2.73	200	112.6	
15:29	9.89	on	0.00	16.60	6.66	0.571	2.17	200	115.6	
15:34	9.84	on	0.00	16.61	6.76	0.560	1.54	150	116.9	
15:39	9.80	on	0.00	16.62	6.74	0.550	1.39	150	117.2	
15:45	9.79	on	0.00	16.64	6.78	0.540	1.04	150	116.2	
15:50	9.73	on	0.00	16.65	6.80	0.535	0.95	150	115.4	
15:55	9.72	on	0.00	16.67	6.81	0.533	0.87	150	114.9	
16:00	9.71	on	0.00	16.69	6.82	0.532	0.85	150	114.4	
16:05	9.71	on	0.00	16.65	6.83	0.524	0.79	150	113.0	
16:10	9.71	on	0.00	16.64	6.84	0.520	0.78	150	117.7	
16:15	9.71	on	0.00	16.63	6.84	0.517	0.77	150	117.2	

Notes: Ferrous Iron 0.0 ppm      Sample ID: ANG-MW-109 (10/2010)

Sample Time: 16:20

Total Vol. Purged: ~2.5 Gallons

Samplers Initials: RS















*APPENDIX B*  
*LABORATORY REPORTS*

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Environmental Resources Management Inc

Client Sample ID: ANG-TRIPBLANK-03(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-001    Work Order #...: L8EM01AA    Matrix.....: WQ  
 Date Sampled...: 10/12/10    Date Received...: 10/13/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	82	(75 - 121)
1,2-Dichloroethane-d4	90	(63 - 129)
Toluene-d8	89	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-EB-02(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-002    Work Order #...: L8EM31AA    Matrix.....: WG  
 Date Sampled...: 10/12/10 10:30    Date Received...: 10/13/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	84	(75 - 121)
1,2-Dichloroethane-d4	88	(63 - 129)
Toluene-d8	93	(74 - 115)
4-Bromofluorobenzene	94	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-9(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-003 Work Order #...: L8EN81AA Matrix.....: WG  
 Date Sampled...: 10/12/10 11:25 Date Received...: 10/13/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(75 - 121)
1,2-Dichloroethane-d4	87	(63 - 129)
Toluene-d8	91	(74 - 115)
4-Bromofluorobenzene	91	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-20(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-004 Work Order #...: L8EPA1AA Matrix.....: WG  
 Date Sampled...: 10/12/10 12:35 Date Received...: 10/13/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(75 - 121)
1,2-Dichloroethane-d4	86	(63 - 129)
Toluene-d8	89	(74 - 115)
4-Bromofluorobenzene	90	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-114(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-005    Work Order #...: L8EPD1AA    Matrix.....: WG  
 Date Sampled...: 10/12/10 15:05    Date Received...: 10/13/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	85	(75 - 121)
1,2-Dichloroethane-d4	87	(63 - 129)
Toluene-d8	89	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-113(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-006 Work Order #...: L8EPE1AA Matrix.....: WG  
Date Sampled...: 10/12/10 16:05 Date Received...: 10/13/10  
Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
Prep Batch #...: 0298401  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	83	(75 - 121)
1,2-Dichloroethane-d4	86	(63 - 129)
Toluene-d8	92	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)



Environmental Resources Management Inc

Client Sample ID: ANG-TRIP BLANK-04 (10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-001    Work Order #...: L8G0X1AA    Matrix.....: WQ  
 Date Sampled...: 10/13/10    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	114	(63 - 129)
Toluene-d8	101	(74 - 115)
4-Bromofluorobenzene	90	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-DUP-02(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-002    Work Order #...: L8G021AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 16:00    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.35 J	1.0	ug/L
Ethylbenzene	9.5	1.0	ug/L
Xylenes (total)	2.4	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(75 - 121)
1,2-Dichloroethane-d4	112	(63 - 129)
Toluene-d8	102	(74 - 115)
4-Bromofluorobenzene	93	(66 - 117)

NOTE (S) :

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-111(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-003    Work Order #...: L8G061AA    Matrix.....: WG  
Date Sampled...: 10/13/10 12:40    Date Received...: 10/14/10  
Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	102	(75 - 121)
1,2-Dichloroethane-d4	114	(63 - 129)
Toluene-d8	102	(74 - 115)
4-Bromofluorobenzene	91	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-112(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-004 Work Order #...: L8G091AA Matrix.....: WG  
 Date Sampled...: 10/13/10 11:45 Date Received...: 10/14/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.36 J	1.0	ug/L
Ethylbenzene	10	1.0	ug/L
Xylenes (total)	2.7	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	103	(74 - 115)
4-Bromofluorobenzene	95	(66 - 117)

NOTE (S) :

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-106(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-005    Work Order #...: L8G1D1AA    Matrix.....: WG  
Date Sampled...: 10/13/10 09:35    Date Received...: 10/14/10  
Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	103	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-107(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-006    Work Order #...: L8G1X1AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 11:05    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	112	(63 - 129)
Toluene-d8	100	(74 - 115)
4-Bromofluorobenzene	87	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-104(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-007 Work Order #...: L8G131AA Matrix.....: WG  
 Date Sampled...: 10/13/10 12:05 Date Received...: 10/14/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(75 - 121)
1,2-Dichloroethane-d4	111	(63 - 129)
Toluene-d8	103	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-110(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-008    Work Order #...: L8G151AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 13:40    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	103	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	104	(74 - 115)
4-Bromofluorobenzene	86	(66 - 117)



Environmental Resources Management Inc

Client Sample ID: ANG-MW-105(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-009    Work Order #...: L8G161AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 14:50    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	5.5	1.0	ug/L
Ethylbenzene	97	1.0	ug/L
Xylenes (total)	92	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	98	(75 - 121)
1,2-Dichloroethane-d4	108	(63 - 129)
Toluene-d8	101	(74 - 115)
4-Bromofluorobenzene	96	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-103(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-010 Work Order #...: L8G171AA Matrix.....: WG  
Date Sampled...: 10/13/10 15:55 Date Received...: 10/14/10  
Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	0.24 J	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	100	(75 - 121)
1,2-Dichloroethane-d4	110	(63 - 129)
Toluene-d8	100	(74 - 115)
4-Bromofluorobenzene	91	(66 - 117)

**NOTE (S) :**

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-5(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-001    Work Order #...: L71FK1AA    Matrix.....: WG  
 Date Sampled...: 10/04/10 11:05    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-18(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-002    Work Order #...: L71FT1AA    Matrix.....: WG  
 Date Sampled...: 10/04/10 12:05    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-108(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-003    Work Order #...: L71FV1AA    Matrix.....: WG  
Date Sampled...: 10/04/10 14:25    Date Received...: 10/05/10  
Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
Prep Batch #...: 0286476  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-102(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-004 Work Order #...: L71F11AA Matrix.....: WG  
Date Sampled...: 10/04/10 16:05 Date Received...: 10/05/10  
Prep Date.....: 10/12/10 Analysis Date...: 10/12/10  
Prep Batch #...: 0286476  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-109(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-005    Work Order #...: L71F41AA    Matrix.....: WG  
 Date Sampled...: 10/04/10 16:20    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-2(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-006    Work Order #...: L71F61AA    Matrix.....: WG  
Date Sampled...: 10/04/10 17:05    Date Received..: 10/05/10  
Prep Date.....: 10/12/10    Analysis Date..: 10/12/10  
Prep Batch #...: 0286476  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)



Environmental Resources Management Inc

Client Sample ID: ANG-EB-01(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-007    Work Order #...: L71F71AA    Matrix.....: WQ  
 Date Sampled...: 10/04/10 17:10    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: TB-01

GC/MS Volatiles

Lot-Sample #...: A0J050456-008    Work Order #...: L71F81AA    Matrix.....: WQ  
 Date Sampled...: 10/04/10    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-16(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-001    Work Order #...: L72WX1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 08:45    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0286479  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-RW-1(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-002    Work Order #...: L72W41AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 09:10    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	3.8	1.0	ug/L
Xylenes (total)	2.8	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-14(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-003    Work Order #...: L72W51AA    Matrix.....: WG  
Date Sampled...: 10/05/10 10:05    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0286479  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	1.7	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-22(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-004    Work Order #...: L72W61AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 10:15    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-3(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-005    Work Order #...: L72W71AA    Matrix.....: WG  
Date Sampled...: 10/05/10 13:10    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0286479  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-4(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-006    Work Order #...: L72W81AA    Matrix.....: WG  
Date Sampled...: 10/05/10 13:25    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0286479  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)



Environmental Resources Management Inc

Client Sample ID: ANG-MW-101(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-007    Work Order #...: L72W91AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 11:20    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	3.2	1.0	ug/L
Xylenes (total)	2.0	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-17(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-008    Work Order #...: L72XA1AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 14:30    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0287174  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	0.95 J	1.0	ug/L
Xylenes (total)	1.2 J	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE (S) :

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-19(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-009    Work Order #...: L72XC1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 14:25    Date Received...: 10/06/10  
Prep Date.....: 10/14/10    Analysis Date...: 10/14/10  
Prep Batch #...: 0288153  
Dilution Factor: 6.25    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND <b>J</b>	6.2	ug/L
Ethylbenzene	100	6.2	ug/L
Xylenes (total)	18	12	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-8(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-010    Work Order #...: L72XE1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 15:40    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0287174  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-15(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-011    Work Order #...: L72XF1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 15:50    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0287174  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	5.3	1.0	ug/L
Ethylbenzene	9.8	1.0	ug/L
Xylenes (total)	0.72 J	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	107	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

**NOTE (S) :**

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-11(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-012    Work Order #...: L72XG1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 16:50    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0287174  
Dilution Factor: 1.67    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	26	1.7	ug/L
Ethylbenzene	7.8	1.7	ug/L
Xylenes (total)	9.5	3.3	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	106	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-DUP-01(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-013    Work Order #...: L72XH1AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 16:00    Date Received...: 10/06/10  
 Prep Date.....: 10/14/10    Analysis Date...: 10/14/10  
 Prep Batch #...: 0288153  
 Dilution Factor: 5    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	2.7 J	5.0	ug/L
Ethylbenzene	120	5.0	ug/L
Xylenes (total)	24	10	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	105	(74 - 116)

NOTE (S) :

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-TRIPBLANK-02(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-014    Work Order #...: L72XJ1AA    Matrix.....: WQ  
 Date Sampled...: 10/05/10    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0287174  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)





Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
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25-Mar-2011

## Analytical Results Report Cover Sheet

For VTA Project Number 201108

Total Number of Pages Including This Cover: 32

Please refer to the bottom of each page for identification of the individual page number.

The results in this report refer to samples collected by the Client.

Results from samples collected by the Client or an associated party relate to the samples or components within as received by the laboratory.

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Any deviations from, additions to, exclusions from, or non-standard conditions that may affect the quality of the results are communicated in the report in text or qualifier form. The following data qualifiers are defined and, where necessary, are utilized on an individual analyte basis in the report:

- B The method blank contained trace levels of analyte; refer to the method blank report.
- E The calibration limit was exceeded; the associated numerical value is the approximate concentration of analyte in the sample.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of analyte in the sample.

### Narrative

The sample identified as 1431 on the chain of custody was not analyzed since a multibed active tube was inadvertently utilized for passive sampling. The 30-day passive indoor air sample ID 1421 was analyzed twice, but no analyte signals were obtained, despite the fact that the field blank analysis was normal. Due to carryover from samples immediately prior to this project, certain analytes had to be qualified as rejected; R data is rejected due to continuing calibration %D values > ±90%. For these cases, the initial calibration RSDs were acceptable for all analytes.



Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107792

Lab Sample Number: 1408

Field Location: Sub-Slab

Date Sampled: 2/7-8/11

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Active Sub-Slab Vapor - Front Tube

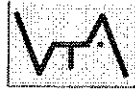
Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.36	0.07
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.76	0.10
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	0.22	0.04
Benzene	1.00	0.07	0.50	0.15
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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**Vapor Trail**  
Analytics

Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107792**

**Field Location: Sub-Slab**

**Client Project Number: 0116255.2A**

**Client Job Site: ANG DGI - Ramtech VI**

**Sample Type: Active Sub-Slab Vapor - Front Tube**

**Lab Sample Number: 1408**

**Date Sampled: 2/7-8/11**

**Date Received: 2/11/11**

**Date Analyzed: 2/28/11**

**Lab Project Number: 201108**

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>	
		<u>RL</u>	<u>Result</u>		<u>Result</u>
Chloroform	1.00	0.03	0.17	0.04	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	0.12	0.03	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	3.34	0.75	
Isopropylbenzene	1.00	0.03	ND	ND	J
<i>m,p</i> -Xylenes	1.00	0.07	1.25	0.28	
Methyl acetate	1.00	0.17	ND	ND	
Methylcyclohexane	1.00	0.03	0.13	0.03	
<i>o</i> -Xylene	1.00	0.03	0.52	0.12	
Styrene	1.00	0.03	3.60	0.83	J
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	1.08	0.28	B
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.11	0.02	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-22.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

**NYSDOH ELAP ID Number: 11932**  
**Analytical Method: USEPA TO-17**

**Analysis Report for Air**

**Field ID Number: 120013**  
**Field Location: Sub-Slab**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Sub-Slab Vapor - Back-up Tube**

**Lab Sample Number: 1409**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.05	0.01
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
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 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120013**  
**Field Location: Sub-Slab**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Sub-Slab Vapor - Back-up Tube**

**Lab Sample Number: 1409**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
<i>m,p</i> -Xylenes	1.00	0.07	ND	
Methyl acetate	1.00	0.17	ND	
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	0.04	0.01 R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-17.D

Signature: Jack D. Fox  
 Jack D. Fox PhD, Technical Director

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 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107800**

**Field Location: Sub-Slab Dupe**

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

**Sample Type: Active Sub-Slab Vapor - Front Tube**

**Lab Sample Number: 1410**

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 3/17/11

Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.29	0.05
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	0.08	0.01 R
1,4-Dichlorobenzene	1.00	0.03	0.08	0.01 R
Benzene	1.00	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

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Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

**Analysis Report for Air**

**Field ID Number: 107800**  
**Field Location: Sub-Slab Dupe**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Sub-Slab Vapor - Front Tube**

**Lab Sample Number: 1410**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 3/21/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	0.36	0.07
cis -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	ND	ND
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	1.31	0.30
Isopropylbenzene	1.00	0.03	0.06	0.01 J
m,p -Xylenes	1.00	0.03	0.58	0.13
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	ND	ND
o -Xylene	1.00	0.03	0.28	0.06
Styrene	1.00	0.03	1.12	0.26 J
Tetrachloroethene	1.00	0.03	ND	ND
Toluene	1.00	0.03	0.44	0.11 B
trans -1,2-Dichloroethene	1.00	0.03	ND	ND
trans -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 032111-6.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

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 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 120012**

**Lab Sample Number: 1411**

**Field Location: Sub-Slab Dupe**

Date Sampled: 2/7-8/11

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

**Sample Type: Active Sub-Slab Vapor - Back-up Tube**

Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.06	0.01
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 120012  
Field Location: Sub-Slab Dupe  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Active Sub-Slab Vapor - Back-up Tube

Lab Sample Number: 1411  
Date Sampled: 2/7-8/11  
Date Received: 2/11/11  
Date Analyzed: 2/28/11  
Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
m,p -Xylenes	1.00	0.07	ND	
Methyl acetate	1.00	0.18	ND	
Methylcyclohexane	1.00	0.03	ND	
o -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-18.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
 Tel: (585) 727-2825  
 www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107791**

**Field Location: Indoor Air**

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1412**

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 3/17/11

Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	0.06	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107791  
**Field Location:** Indoor Air  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Indoor Air - Front Tube

**Lab Sample Number:** 1412  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
m,p -Xylenes	0.06	0.03	ND	
Methyl acetate	0.15	0.03	ND	
Methylcyclohexane	1.00	0.03	ND	
o -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 031711-6.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 120016

Lab Sample Number: 1413

Field Location: Indoor Air

Date Sampled: 2/7-8/11

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Active Indoor Air - Back-up Tube

Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	0.06	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 120016  
Field Location: Indoor Air  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Active Indoor Air - Back-up Tube

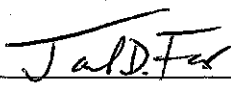
Lab Sample Number: 1413  
Date Sampled: 2/7-8/11  
Date Received: 2/11/11  
Date Analyzed: 2/28/11  
Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
m,p -Xylenes	0.06	0.03	ND	
Methyl acetate	0.15	0.03	ND	
Methylcyclohexane	1.00	0.03	ND	
o -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-19.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107796  
**Field Location:** Indoor Air Dupe  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Indoor Air - Front Tube

**Lab Sample Number:** 1414  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.04	0.21	0.04
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.74	0.09
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.08	0.02
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	0.15	0.03 R
Benzene	1.00	0.07	0.81	0.25
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	0.27	0.04
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
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 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107796  
**Field Location:** Indoor Air Dupe  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Indoor Air - Front Tube


**Lab Sample Number:** 1414  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.04	0.18	0.04
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	0.76	0.22
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.43	0.10
Isopropylbenzene	1.00	0.03	0.07	0.01 J
<i>m,p</i> -Xylenes	1.00	0.07	1.06	0.24
Methyl acetate	1.00	0.18	ND	ND
Methylcyclohexane	1.00	0.03	0.41	0.10
<i>o</i> -Xylene	1.00	0.03	0.46	0.10
Styrene	1.00	0.03	0.51	0.12 J
Tetrachloroethene	1.00	0.03	0.22	0.03
Toluene	1.00	0.03	1.61	0.42 B
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	0.09	0.02
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	0.05	0.01 R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 031711-7.D

Signature: 

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 120020

Field Location: Indoor Air Dupe

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Active Indoor Air - Back-up Tube

Lab Sample Number: 1415

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120020**

**Field Location: Indoor Air Dupe**

**Client Project Number: 0116255.2A**

**Client Job Site: ANG DGI - Ramtech VI**

**Sample Type: Active Indoor Air - Back-up Tube**

**Lab Sample Number: 1415**

**Date Sampled: 2/7-8/11**

**Date Received: 2/11/11**

**Date Analyzed: 2/28/11**

**Lab Project Number: 201108**

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
<i>m,p</i> -Xylenes	1.00	0.07	ND	
Methyl acetate	1.00	0.18	ND	
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-20.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107798**  
**Field Location: Ambient Outdoor**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Outdoor Air - Front Tube**

**Lab Sample Number: 1416**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 3/17/11  
 Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.04	0.01
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.70	0.08
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.05	0.01
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	0.73	0.21
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	0.04	0.00 R
Carbon tetrachloride	1.00	0.03	0.25	0.04
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

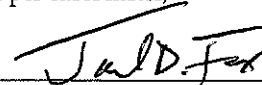
**Field ID Number:** 107798  
**Field Location:** Ambient Outdoor  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Outdoor Air - Front Tube

**Lab Sample Number:** 1416  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers	
		RL	Result		Result
Chloroform	1.00	0.03	0.06	0.01	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	0.07	0.02	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	0.15	0.03	
Isopropylbenzene	1.00	0.03	ND	ND	J
m,p -Xylenes	1.00	0.07	0.39	0.08	
Methyl acetate	1.00	0.16	ND	ND	
Methylcyclohexane	1.00	0.03	0.21	0.05	
o -Xylene	1.00	0.03	0.15	0.03	
Styrene	1.00	0.03	ND	ND	J
Tetrachloroethene	1.00	0.03	0.11	0.02	
Toluene	1.00	0.03	0.66	0.16	B
trans -1,2-Dichloroethene	1.00	0.03	ND	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.06	0.01	R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 031711-8.D

Signature:   
 Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.  
 Please refer to the included chain of custody for additional sample information.



25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

**Analysis Report for Air**

**Field ID Number: 120018**

**Field Location: Ambient Outdoor**

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

**Sample Type: Active Outdoor Air - Back-up Tube**

**Lab Sample Number: 1417**

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.05	0.01
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

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**Vapor Trail**  
Analytics

Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

**Analysis Report for Air**

Field ID Number: 120018

Field Location: Ambient Outdoor

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Active Outdoor Air - Back-up Tube

Lab Sample Number: 1417

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

Analyte	DF	RL	Result	Result	Qualifiers
			( $\mu\text{g}\cdot\text{m}^{-3}$ )	( $\mu\text{g}\cdot\text{m}^{-3}$ )	(ppbv)
Chloroform	1.00	0.03	ND	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	ND	ND	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	ND	ND	
Isopropylbenzene	1.00	0.03	ND	ND	J
m,p -Xylenes	1.00	0.03	ND	ND	
Methyl acetate	1.00	0.03	ND	ND	
Methylcyclohexane	1.00	0.03	ND	ND	
o -Xylene	1.00	0.03	ND	ND	
Styrene	1.00	0.03	ND	ND	J
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	ND	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.03	0.01	R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-21.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Field Blank Report for Air

Field ID Number: 107797

Field Location: Active Blank

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Field Blank for Active Sampling

Dilution Factor: 1

Lab Sample Number: 1418

Date Sampled: 2/7/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

Analyte	Reporting Limit (ng)	Mass on Tube (ng)
1,1,1-Trichloroethane	1.0	ND
1,1,2,2-Tetrachloroethane	1.0	ND
1,1,2-Trichloroethane	1.0	ND
1,1,2-Trichlorotrifluoroethane	1.0	ND
1,1-Dichloroethane	1.0	ND
1,1-Dichloroethene	1.0	ND
1,2,4-Trichlorobenzene	1.0	ND
1,2-Dibromo-3-chloropropane	1.0	ND
1,2-Dibromoethane	1.0	ND
1,2-Dichlorobenzene	1.0	ND
1,2-Dichloroethane	1.0	ND
1,2-Dichloropropane	1.0	ND
1,3-Dichlorobenzene	1.0	ND
1,4-Dichlorobenzene	1.0	ND
Benzene	2.0	ND
Bromodichloromethane	1.0	ND
Bromoform	1.0	ND
Carbon disulfide	1.0	ND
Carbon tetrachloride	1.0	ND
Chlorobenzene	1.0	ND

Comments: ng = nanograms. ND = Not Detected

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Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Field Blank Report for Air

Field ID Number: 107797

Lab Sample Number: 1418

Field Location: Active Blank

Date Sampled: 2/7/11

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Field Blank for Active Sampling

Lab Project Number: 201108

Dilution Factor: 1

Analyte	Reporting Limit (ng)	Mass on Tube (ng)
Chloroform	1.0	ND
cis -1,2-Dichloroethene	1.0	ND
cis -1,3-Dichloropropene	1.0	ND
Cyclohexane	1.0	ND
Dibromochloromethane	1.0	ND
Ethylbenzene	1.0	ND
Isopropylbenzene	1.0	ND J
m,p -Xylenes	2.0	ND
Methyl acetate	5.0	ND
Methyl tert -butyl ether	1.0	ND
Methylcyclohexane	1.0	ND
Methylene chloride	1.0	ND
o -Xylene	1.0	ND
Styrene	1.0	ND J
Tetrachloroethene	2.0	ND
Toluene	1.0	ND
trans -1,2-Dichloroethene	1.0	ND
trans -1,3-Dichloropropene	1.0	ND
Trichloroethene	1.0	ND

Comments: ng = nanograms. ND = Not Detected

Data File: 022811-16.D

Signature:   
Jack D. Fox PhD, Technical Director

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**Vapor Trail**  
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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

**Laboratory Blank Report for Air**

Field ID Number: 120011

Lab Sample Number: 1419

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Lab Method Blank #1 (Before Samples)

Lab Project Number: 201108

Dilution Factor: 1

(ng)

(ng)

Analyte	Reporting Limit	Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,1,2,2-Tetrachloroethane	1.0	ND
1,1,2-Trichloroethane	1.0	ND
1,1,2-Trichlorotrifluoroethane	1.0	ND
1,1-Dichloroethane	1.0	ND
1,1-Dichloroethene	1.0	ND
1,2,4-Trichlorobenzene	1.0	ND
1,2-Dibromo-3-chloropropane	1.0	ND
1,2-Dibromoethane	1.0	ND
1,2-Dichlorobenzene	1.0	ND
1,2-Dichloroethane	1.0	ND
1,2-Dichloropropane	1.0	ND
1,3-Dichlorobenzene	1.0	ND
1,4-Dichlorobenzene	1.0	ND
Benzene	2.0	ND
Bromodichloromethane	1.0	ND
Bromoform	1.0	ND
Carbon disulfide	1.0	ND
Carbon tetrachloride	1.0	ND
Chlorobenzene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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**Vapor Trail**  
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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 120011

Lab Sample Number: 1419

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Lab Method Blank #1 (Before Samples)

Lab Project Number: 201108

Dilution Factor: 1

(ng)

(ng)

<u>Analyte</u>	<u>Reporting Limit</u>	<u>Mass on Tube</u>
Chloroform	1.0	ND
<i>cis</i> -1,2-Dichloroethene	1.0	ND
<i>cis</i> -1,3-Dichloropropene	1.0	ND
Cyclohexane	1.0	ND
Dibromochloromethane	1.0	ND
Ethylbenzene	1.0	ND
Isopropylbenzene	1.0	ND
<i>m,p</i> -Xylenes	2.0	ND
Methyl acetate	5.0	ND
Methyl <i>tert</i> -butyl ether	1.0	ND
Methylcyclohexane	1.0	ND
Methylene chloride	1.0	ND
<i>o</i> -Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethene	2.0	ND
Toluene	1.0	ND
<i>trans</i> -1,2-Dichloroethene	1.0	ND
<i>trans</i> -1,3-Dichloropropene	1.0	ND
Trichloroethene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 022811-15.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 140420

Lab Sample Number: 1420

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Lab Method Blank #2 (After Samples)

Lab Project Number: 201108

Dilution Factor: 1

(ng)

(ng)

<u>Analyte</u>	<u>Reporting Limit</u>	<u>Mass on Tube</u>
1,1,1-Trichloroethane	1.0	ND
1,1,2,2-Tetrachloroethane	1.0	ND
1,1,2-Trichloroethane	1.0	ND
1,1,2-Trichlorotrifluoroethane	1.0	ND
1,1-Dichloroethane	1.0	ND
1,1-Dichloroethene	1.0	ND
1,2,4-Trichlorobenzene	1.0	ND
1,2-Dibromo-3-chloropropane	1.0	ND
1,2-Dibromoethane	1.0	ND
1,2-Dichlorobenzene	1.0	ND
1,2-Dichloroethane	1.0	ND
1,2-Dichloropropane	1.0	ND
1,3-Dichlorobenzene	1.0	ND
1,4-Dichlorobenzene	1.0	ND
Benzene	2.0	ND
Bromodichloromethane	1.0	ND
Bromoform	1.0	ND
Carbon disulfide	1.0	ND
Carbon tetrachloride	1.0	ND
Chlorobenzene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 140420

Lab Sample Number: 1420

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 3/17/11

Sample Type: Lab Method Blank #2 (After Samples)

Lab Project Number: 201108

Dilution Factor: 1

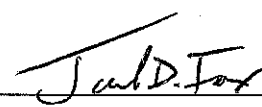
(ng)

(ng)

Analyte	Reporting Limit	Mass on Tube
Chloroform	1.0	ND
cis -1,2-Dichloroethene	1.0	ND
cis -1,3-Dichloropropene	1.0	ND
Cyclohexane	1.0	ND
Dibromochloromethane	1.0	ND
Ethylbenzene	1.0	ND
Isopropylbenzene	1.0	ND
m,p -Xylenes	2.0	ND
Methyl acetate	5.0	ND
Methyl tert -butyl ether	1.0	ND
Methylcyclohexane	1.0	ND
Methylene chloride	1.0	ND
o -Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethene	2.0	ND
Toluene	1.0	1.1
trans -1,2-Dichloroethene	1.0	ND
trans -1,3-Dichloropropene	1.0	ND
Trichloroethene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 031711-9.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Analysis Report for Air

Field ID Number: GO122008  
Field Location: Indoor Air  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1421  
Dates Sampled: 1/10-2/8/11  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

Analyte	( $\mu\text{g}\cdot\text{m}^{-3}$ ) Reporting Limit	( $\mu\text{g}\cdot\text{m}^{-3}$ ) Result
1,1,1-Trichloroethane	0.06	NASD J
1,2-Dichloroethane	0.05	NASD
Benzene	0.04	NASD B
Chloroform	0.05	NASD
Cyclohexane	0.05	NASD
Ethylbenzene	0.05	NASD
Isopropylbenzene	0.05	NASD
m,p-Xylenes	0.04	NASD
Methyl acetate	0.05	NASD J
Methylcyclohexane	0.05	NASD
o-Xylene	0.05	NASD
Styrene	0.05	NASD J
Tetrachloroethylene	0.05	NASD
Toluene	0.05	NASD
Trichloroethylene	0.05	NASD

Comments:  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter. ND = Not Detected.

NASD = No Analyte Signals Detected; tube contamination or anomaly indicated.

Data File: 022111-15.D, 022211-4.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Tentatively Identified Compounds in Air

Field ID Number: GO122008  
Field Location: Indoor Air  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Long-Term Passive Indoor Air

Lab Sample Number: 1421  
Dates Sampled: 1/10-2/8/11  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

<u>Compound</u>	<u>Mass on Tube</u> (ng)	<u>Estimated Concentration</u> ( $\mu\text{g}\cdot\text{m}^{-3}$ )
-----------------	-----------------------------	---

NASD = No Analyte Signals Detected; tube contamination or anomaly indicated.

Comments: ng = nanograms.

Data File: 022111-15.D, 022211-4.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Field Blank Report for Air

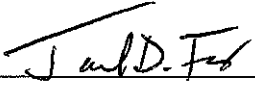
Field ID Number: GO122028  
Field Location: Passive Blank  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Field Blank for Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1422  
Date Sampled: 1/10/11  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND J
1,2-Dichloroethane	1.0	ND
Benzene	2.0	2.9 B
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND J
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND J
Tetrachloroethylene	1.0	ND
Toluene	2.0	ND
Trichloroethylene	1.0	ND

Comments: ng = nanograms. ND = Not Detected.

Data File: 022111-14.D

Signature: 

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO122005

Lab Sample Number: 1423

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/21/11

Sample Type: Lab Method Blank #1 (Before Samples)


Lab Project Number: 201108

Dilution Factor: 1

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	2.0	2.5
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethylene	1.0	ND
Toluene	2.0	ND
Trichloroethylene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 022111-13.D

Signature: 

Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

Please refer to the included chain of custody for additional sample information.



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO122047

Lab Sample Number: 1424

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/21/11

Sample Type: Lab Method Blank #2 (After Samples)

Lab Project Number: 201108

Dilution Factor: 1

<u>Analyte</u>	<u>(ng)</u> <u>Reporting Limit</u>	<u>(ng)</u> <u>Mass on Tube</u>
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	2.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethylene	1.0	ND
Toluene	2.0	ND
Trichloroethylene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 022111-17.D

Signature: Jack D. Fox  
Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

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Volatiles and Semivolatiles Characterization  
Office: 16015 Lomond Shores, Kendall, NY 14476 USA

Rev 0 Effective 15 Apr 2008

### COMPENDIUM METHOD TO-17 FIELD TEST DATA SHEET (FTDS)

#### I. General Information

Project: ANG DGI- Ramtech VI Date(s) Sampled: 2/7/2011 -> 2/8/2011  
Site: RAMTECH Engineering Time Period Sampled: 24-hour  
Location: 6100 Fairway Drive, Syracuse, NY Operator: R. Sants / D. Myers  
Instrument Model No.: SKC Pocket Pump Calibrated By: J  
Pump Serial No.: 22202, 17737, 19051, 19201, 19060. Rotameter Serial No.: 217763-1  
Rain:  Yes  No  
*snow*

#### Sampling Tube Adsorbent Cartridge Information

Tube Type: SS  
Adsorbent(s): TA-1TD-5TD

#### II. Sampling Data

Tube ID	Sampling Location	Ambient Temp. (°F)	Ambient Pressure (in. Hg)	Pre-Sampling Flow Rate (mL/min)	Initial Sampling Time	Post-Sampling Flow Rate (mL/min)	Final Sampling Time	Total Time (min)	Mean Flow Rate (mL/min)	Total Sample Volume (mL) <sup>1</sup>
*107792	sub-slab	22.65	29.86	18-22	2/7/11 14:03	18-22	2/8/11 19:03	1440	20	28,800
120013	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
*107800	sub-slab	↓	↓	18-22	2/7/11 14:03	18-22	2/8/11 19:03	1440	20	28,800
120012	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
*107791	indoor	↓	↓	20-28	2/7/11 14:06	18-28	2/8/11 19:07	1441	23	33,143
120016	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

\* first tube

#### III. Field Audit

Do all pre- and post-air sampling flow rates agree to within 10%?  Yes  No  
If not, list the relevant tube IDs here: \_\_\_\_\_

Are any apparent total sampling volumes greater than 5000 mL?  Yes  No  
If so, list the relevant tube IDs here: All tubes

<sup>1</sup> This will be verified using the rotameter calibration at the Analytical Laboratory.



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Volatiles and Semivolatiles Characterization  
Office: 16015 Lomond Shores, Kendall, NY 14476 USA

Rev 0 Effective 15 Apr 2008

### COMPENDIUM METHOD TO-17 FIELD TEST DATA SHEET (FTDS)

#### I. General Information

Project: ANG DGI - RAMTECH VI Date(s) Sampled: 2/7/2011 → 2/8/2011  
Site: Ramtech Engineering Time Period Sampled: 24-hour  
Location: 6100 Fairway Dr, Syracuse, NY Operator: R. Sents / D. Myers  
Instrument Model No.: SKC Pocket Pumps Calibrated By: J  
Pump Serial No.: 2202, 17757, 19051, 19201, 19060 Rotameter Serial No.: 217763-1  
Rain:  Yes  No

#### Sampling Tube Adsorbent Cartridge Information

Tube Type: SS  
Adsorbent(s): TA-110-STD

#### II. Sampling Data

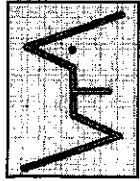
Tube ID	Sampling Location	Ambient Temp. (°F)	Ambient Pressure (in. Hg)	Pre-Sampling Flow Rate (mL/min)	Initial Sampling Time	Post-Sampling Flow Rate (mL/min)	Final Sampling Time	Total Time (min)	Mean Flow Rate (mL/min)	Total Sample Volume (mL) <sup>1</sup>
* 167796	indoor	65	29.86	18-22	2/7/11 19:08	16-21	2/8/11 19:08	1440	19	27360
120020	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
* 107798	ambient outdoor	22	↓	18-24	2/7/11 19:15	18-22	2/8/11 19:24	1449	21	30429
120018	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

#### III. Field Audit

Do all pre- and post-air sampling flow rates agree to within 10%?  Yes  No  
If not, list the relevant tube IDs here: \_\_\_\_\_

Are any apparent total sampling volumes greater than 5000 mL?  Yes  No  
If so, list the relevant tube IDs here: All tubes

<sup>1</sup> This will be verified using the rotameter calibration at the Analytical Laboratory.



# Vapor Trail Analytics

Stratospheric Performance

179 Lake Avenue  
Rochester, New York 14608 USA  
Phone: (585) 727-2865-25

PROJECT/SITE:

ANG DGI - RAMTECH VI

## CHAIN OF CUSTODY RECORD

Page 1 of 2

SEND REPORT TO:

PERSON/COMPANY: Dave Myers/ERM  
ADDRESS: 5788 Wickwaders Parkway  
CITY: Dewitt STATE: NY ZIP: 13214  
PHONE: FAX: 315-233-3039 / 315-445-2554  
EMAIL: Dave.Myers@ERM.com

SEND INVOICE TO:

PERSON/COMPANY:  
ADDRESS:  
CITY: STATE: ZIP:  
PHONE: FAX: Same  
EMAIL:

LAB PROJECT #: 201108 CLIENT PROJECT #: 016255.ZA  
REQUESTED TURNAROUND TIME  
STD  1  2  3  5  10  
SAME DAY

COMMENTS:

### REQUESTED ANALYSIS

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Number Containers	Remarks	VTA Sample Number
1 107792-120013	2/7/2011 19:03	2/8/2011 19:03	active 24-hour	Sub-slab	X	Sub-slab	1408
2 107800-120012	2/7/2011 19:03	2/8/2011 19:03		Sub-slab	X	Sub-slab-Dup	1410
3 107791-120016	2/7/2011 19:06	2/8/2011 19:07		indoor	X	Indoor Air	1412
4 107796-120020	2/7/2011 19:08	2/8/2011 19:08		indoor	X	Indoor Air-Dup	1414
5 107798-120018	2/7/2011 19:15	2/8/2011 19:24		ambient outdoor	X	Ambient Outdoor	1416
6 107797	2/7/2011 19:05	2/7/2011 19:10	active field blank		X	active Blank	1418
7 60125843	2/7/2011 18:55			30-Day Passive		Passive Indoor Evaluation will be completed in March 2011	
8 60124449	2/7/2011 18:55			Passive blank			
9 60157992	2/7/2011 18:50	2/7/2011 18:55	passive field blank				
10 120011							

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter

NELAC Compliance

Temperature:

23°C

Y  N

Holding Time:

N/A

Y  N

General Comments:

Receiving:

Signature: [Signature]  
Sampled By

2/8/11 20:00  
Date/Time

Relinquished By

C. Sawyer  
Received By

Date/Time

2/11/11 11:07  
Date/Time

Received At Lab By

Bill Bunn

Date/Time

2/11/11 11:20  
Date/Time

Received At Lab By

Date/Time



# Vapor Trail Analytics

Stratospheric Performance

179 Lake Avenue  
Rochester, New York 14608 USA  
Phone: (585) 727-2865-25

PROJECT/SITE:

ANG-DGI - RamTech VI

## CHAIN OF CUSTODY RECORD

Page 2 of 2

SEND REPORT TO:

PERSON/COMPANY:

Dave Myers /ERM  
5788 Widemakers Parkway  
Dewitt  
STATE: NY ZIP: 13214  
PHONE: FAX: 315-233-3038 / 315-445-2543  
EMAIL: Dave.Myers@ERM.com

SEND INVOICE TO:

PERSON/COMPANY:

ADDRESS: Same  
CITY: Same  
PHONE: FAX: Same  
STATE: Same  
ZIP: Same  
EMAIL: Same

LAB PROJECT #:

201108

CLIENT PROJECT #:

0116255.2A

REQUESTED TURNAROUND TIME

1  2  3

STD  SAME DAY

Quotation #

COMMENTS:

REQUESTED ANALYSIS

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Number Containers	Remarks	VTA Sample Number
1 60122008	1/10/2011 21:00	2/18/2011 19:25	Passive 30-Day	indoor air	1		1421
2 MI 140412	1/10/2011 21:00	1/10/2011 19:25	↓	↓	↓	do not run	1431
3 60122028	1/10/2011 21:00	2/18/2011 19:25	Passive blank	↓	↓		1422
4 60158978	F 2/11/11	→	GO122005	→	→	→ LB1	1423
5 60158954	F 2/11/11	→	GO122047	→	→	→ LB2	1424
6							
7							
8							
9							
10							

Sample Condition: Per NELAC/LAP 210/241/242/243/244

Receipt Parameter

Temperature:

23°C

Holding Time:

N/A

NELAC Compliance

Y  N

Receiving:

*[Signature]*  
Sampled By

2/18/2011 20:00  
Date/Time

Comments: General Comments:

Relinquished By

C. Sawyer  
Date/Time: 2/11/11 11:07

Received By

Bill Burr  
Date/Time: 2/11/11 11:30

Received At Lab By

Date/Time



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

4-Mar-2011

## Analytical Results Report Cover Sheet

For VTA Project Number 201102

Total Number of Pages Including This Cover: 25

Please refer to the bottom of each page for identification of the individual page number.

The results in this report refer to samples collected by the Client.

Results from samples collected by the Client or an associated party relate to the samples or components within as received by the laboratory.

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Any deviations from, additions to, exclusions from, or non-standard conditions that may affect the quality of the results are communicated in the report in text or qualifier form. The following data qualifiers are defined and, where necessary, are utilized on an individual analyte basis in the report:

- B The method blank contained trace levels of analyte; refer to the method blank report.
- E The calibration limit was exceeded; the associated numerical value is the approximate concentration of analyte in the sample.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of analyte in the sample.

### Narrative

Due to the inadvertent switching of active and passive field blank tubes, the results in this study are reported without the use of the labeled field blank (sample 1352). Given that the samples were collected with the primary (front) sorbent tubes backed up, taken together with the fact that none of the backup tubes demonstrated that breakthrough had occurred, the backup tube results can be considered to be functionally equivalent to field blanks. In our professional opinion, the quality of the sample results in this study has not been affected.



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
 Tel: (585) 727-2825  
 www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140403**  
**Field Location: Indoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1342**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.40	0.07
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	0.45	0.08
1,1,2-Trichlorotrifluoroethane	1.00	0.03	2.10	0.27 J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	0.05	0.01
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.10	0.02
1,2-Dichloropropane	1.00	0.03	0.03	0.01
1,3-Dichlorobenzene	1.00	0.03	0.13	0.02
1,4-Dichlorobenzene	1.00	0.03	0.12	0.02
Benzene	1.00	0.03	0.77	0.24 B
Bromodichloromethane	1.00	0.03	0.04	0.01
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	0.72	0.11
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Note: This report is part of a multipart document, and should only be evaluated in its entirety.  
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Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

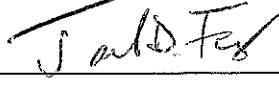
Field ID Number: 140403  
Field Location: Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Indoor Air - Front Tube

Lab Sample Number: 1342  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	RL	Result	Result	Qualifiers
Chloroform	1.00	0.03	0.25	0.05	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	3.52	1.00	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	0.25	0.06	
Isopropylbenzene	1.00	0.03	0.04	0.01	
m,p -Xylenes	1.00	0.03	0.53	0.12	
Methyl acetate	1.00	0.03	0.10	0.03	B
Methylcyclohexane	1.00	0.03	3.62	0.88	
o -Xylene	1.00	0.03	0.22	0.05	
Styrene	1.00	0.03	0.30	0.07	
Tetrachloroethene	1.00	0.03	0.38	0.05	
Toluene	1.00	0.03	1.31	0.34	
trans -1,2-Dichloroethene	1.00	0.03	ND	ND	J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.03	0.005	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-21.D

Signature: 

Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

Please refer to the included chain of custody for additional sample information.



Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140401**  
**Field Location: Indoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Backup Tube**

**Lab Sample Number: 1343**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
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4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 140401  
Field Location: Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Indoor Air - Backup Tube

Lab Sample Number: 1343  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	ND
cis -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	ND	ND
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	ND	ND
Isopropylbenzene	1.00	0.03	ND	ND
m,p -Xylenes	1.00	0.03	ND	ND
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	ND	ND
o -Xylene	1.00	0.03	ND	ND
Styrene	1.00	0.03	ND	ND
Tetrachloroethene	1.00	0.03	ND	ND
Toluene	1.00	0.03	ND	ND
trans -1,2-Dichloroethene	1.00	0.03	ND	ND J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-16.D

Signature:

Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
 Tel: (585) 727-2825  
 www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 140415  
 Field Location: Sub-Slab Duplicate  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
 Sample Type: Active Sub-Slab - Front Tube

Lab Sample Number: 1344  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.07	0.01
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.30	0.04 J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	0.24	0.07 B
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140415**  
**Field Location: Sub-Slab Duplicate**  
Client Project Number: Not Indicated  
Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Front Tube**

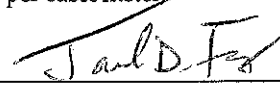
**Lab Sample Number: 1344**  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	0.04	0.01
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	0.36	0.10
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.20	0.05
Isopropylbenzene	1.00	0.03	ND	ND
<i>m,p</i> -Xylenes	1.00	0.03	0.10	0.02
Methyl acetate	1.00	0.03	0.08	0.02 B
Methylcyclohexane	1.00	0.03	0.51	0.12
<i>o</i> -Xylene	1.00	0.03	0.06	0.01
Styrene	1.00	0.03	1.49	0.34
Tetrachloroethene	1.00	0.03	0.10	0.01
Toluene	1.00	0.03	0.39	0.10
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	0.13	0.03 J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-22.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
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 www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 140416

Lab Sample Number: 1345

Field Location: Sub-Slab Duplicate

Date Sampled: 1/10/11

Client Project Number: Not Indicated

Date Received: 1/14/11

Client Job Site: ANG

Date Analyzed: 1/19/11

Sample Type: Active Sub-Slab - Backup Tube

Lab Project Number: 201102

Analyte	DF	RL	Result	Result	Qualifiers
1,1,1-Trichloroethane	1.00	0.03	ND	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.04	0.005	J
1,1-Dichloroethane	1.00	0.03	ND	ND	
1,1-Dichloroethene	1.00	0.03	ND	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND	
1,2-Dibromoethane	1.00	0.03	ND	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	ND	
1,2-Dichloroethane	1.00	0.03	ND	ND	
1,2-Dichloropropane	1.00	0.03	ND	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	ND	
Benzene	1.00	0.03	0.03	0.01	B
Bromodichloromethane	1.00	0.03	ND	ND	
Bromoform	1.00	0.03	ND	ND	
Carbon tetrachloride	1.00	0.03	ND	ND	
Chlorobenzene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Client: ERM, Inc.  
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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 140416  
 Field Location: Sub-Slab Duplicate  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
 Sample Type: Active Sub-Slab - Backup Tube

Lab Sample Number: 1345  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	0.17	0.04
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	ND	ND
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	ND	ND
Isopropylbenzene	1.00	0.03	ND	ND
<i>m,p</i> -Xylenes	1.00	0.03	ND	ND
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	ND	ND
<i>o</i> -Xylene	1.00	0.03	ND	ND
Styrene	1.00	0.03	ND	ND
Tetrachloroethene	1.00	0.03	ND	ND
Toluene	1.00	0.03	ND	ND
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	0.03	0.01 J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-17.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140416**

**Lab Sample Number: 1346**

**Field Location: Sub-Slab**

Date Sampled: 1/10/11

Client Project Number: Not Indicated

Date Received: 1/14/11

Client Job Site: ANG

Date Analyzed: 1/19/11

**Sample Type: Active Sub-Slab - Front Tube**

Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.11	0.03	0.29	0.05
1,1,2,2-Tetrachloroethane	1.11	0.03	ND	ND
1,1,2-Trichloroethane	1.11	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.11	0.03	1.06	0.14 J
1,1-Dichloroethane	1.11	0.03	ND	ND
1,1-Dichloroethene	1.11	0.03	ND	ND
1,2,4-Trichlorobenzene	1.11	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.11	0.03	0.20	0.02
1,2-Dibromoethane	1.11	0.03	ND	ND
1,2-Dichlorobenzene	1.11	0.03	ND	ND
1,2-Dichloroethane	1.11	0.03	ND	ND
1,2-Dichloropropane	1.11	0.03	ND	ND
1,3-Dichlorobenzene	1.11	0.03	ND	ND
1,4-Dichlorobenzene	1.11	0.03	0.04	0.01
Benzene	1.11	0.03	0.34	0.10 B
Bromodichloromethane	1.11	0.03	ND	ND
Bromoform	1.11	0.03	ND	ND
Carbon tetrachloride	1.11	0.03	3.53	0.55
Chlorobenzene	1.11	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140416**  
**Field Location: Sub-Slab**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Front Tube**


**Lab Sample Number: 1346**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
Chloroform	1.11	0.03	0.06	0.01
<i>cis</i> -1,2-Dichloroethene	1.11	0.03	ND	ND
Cyclohexane	1.11	0.03	0.76	0.22
Dibromochloromethane	1.11	0.03	ND	ND
Ethylbenzene	1.11	0.03	0.51	0.12
Isopropylbenzene	1.11	0.03	ND	ND
<i>m,p</i> -Xylenes	1.11	0.03	0.20	0.04
Methyl acetate	1.11	0.03	ND	ND
Methylcyclohexane	1.11	0.03	0.91	0.22
<i>o</i> -Xylene	1.11	0.03	0.12	0.03
Styrene	1.11	0.03	2.12	0.49
Tetrachloroethene	1.11	0.03	0.14	0.02
Toluene	1.11	0.03	0.57	0.15
<i>trans</i> -1,2-Dichloroethene	1.11	0.03	0.33	0.08 J
<i>trans</i> -1,3-Dichloropropene	1.11	0.03	0.08	0.02
Trichloroethene	1.11	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 013111-6.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

Field ID Number: 107796

Lab Sample Number: 1347

Field Location: Sub-Slab

Date Sampled: 1/10/11

Client Project Number: Not Indicated

Date Received: 1/14/11

Client Job Site: ANG

Date Analyzed: 1/19/11

Sample Type: Active Sub-Slab - Backup Tube

Lab Project Number: 201102

Analyte	DF	RL	Result	Result	Qualifiers
1,1,1-Trichloroethane	1.00	0.03	ND	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.25	0.03	J
1,1-Dichloroethane	1.00	0.03	ND	ND	
1,1-Dichloroethene	1.00	0.03	ND	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND	
1,2-Dibromoethane	1.00	0.03	ND	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	ND	
1,2-Dichloroethane	1.00	0.03	ND	ND	
1,2-Dichloropropane	1.00	0.03	ND	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	ND	
Benzene	1.00	0.03	ND	ND	
Bromodichloromethane	1.00	0.03	ND	ND	
Bromoform	1.00	0.03	ND	ND	
Carbon tetrachloride	1.00	0.03	ND	ND	
Chlorobenzene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107796  
Field Location: Sub-Slab  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Sub-Slab - Backup Tube

Lab Sample Number: 1347  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	0.03	0.01
cis -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	ND	ND
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	ND	ND
Isopropylbenzene	1.00	0.03	ND	ND
m,p -Xylenes	1.00	0.03	ND	ND
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	ND	ND
o -Xylene	1.00	0.03	ND	ND
Styrene	1.00	0.03	ND	ND
Tetrachloroethene	1.00	0.03	ND	ND
Toluene	1.00	0.03	ND	ND
trans -1,2-Dichloroethene	1.00	0.03	0.10	0.02 J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-18.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

**NYSDOH ELAP ID Number: 11932**  
**Analytical Method: USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107793**

**Field Location: Indoor Air Duplicate**

Client Project Number: Not Indicated

Client Job Site: ANG

**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1348**

Date Sampled: 1/10/11

Date Received: 1/14/11

Date Analyzed: 1/19/11

Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.44	0.08
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	2.47	0.32 J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	0.03	0.003
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.11	0.03
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	0.15	0.03
Benzene	1.00	0.03	0.74	0.23 B
Bromodichloromethane	1.00	0.03	0.03	0.004
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	0.73	0.11
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107793  
**Field Location:** Indoor Air Duplicate  
**Client Project Number:** Not Indicated  
**Client Job Site:** ANG  
**Sample Type:** Active Indoor Air - Front Tube

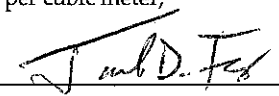
**Lab Sample Number:** 1348  
**Date Sampled:** 1/10/11  
**Date Received:** 1/14/11  
**Date Analyzed:** 1/19/11  
**Lab Project Number:** 201102

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	0.26	0.05
cis -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	2.55	0.73
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.28	0.06
Isopropylbenzene	1.00	0.03	0.06	0.01
m,p -Xylenes	1.00	0.03	0.27	0.06
Methyl acetate	1.00	0.03	0.13	0.04 B
Methylcyclohexane	1.00	0.03	3.28	0.80
o -Xylene	1.00	0.03	0.25	0.06
Styrene	1.00	0.03	0.99	0.23
Tetrachloroethene	1.00	0.03	0.36	0.05
Toluene	1.00	0.03	1.19	0.31
trans -1,2-Dichloroethene	1.00	0.03	ND	ND J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	0.04	0.01

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-24.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

Field ID Number: 107797

Lab Sample Number: 1349

Field Location: Indoor Air Duplicate

Date Sampled: 1/10/11

Client Project Number: Not Indicated

Date Received: 1/14/11

Client Job Site: ANG

Date Analyzed: 1/19/11

Sample Type: Active Indoor Air - Backup Tube

Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107797  
Field Location: Indoor Air Duplicate  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Indoor Air - Backup Tube

Lab Sample Number: 1349  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	
m,p -Xylenes	1.00	0.03	ND	
Methyl acetate	1.00	0.03	ND	
Methylcyclohexane	1.00	0.03	ND	
o -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	J
trans -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-19.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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4-Mar-2011

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 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107799  
 Field Location: Outdoor Air  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
 Sample Type: Active Outdoor Air - Front Tube

Lab Sample Number: 1350  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.04	0.01
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	2.11	0.24 J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.08	0.02
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	0.56	0.15 B
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	0.69	0.09
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

**Analysis Report for Air**


**Field ID Number: 107799**  
**Field Location: Outdoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Outdoor Air - Front Tube**

**Lab Sample Number: 1350**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	0.07	0.01
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	0.18	0.05
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.09	0.02
Isopropylbenzene	1.00	0.03	ND	ND
<i>m,p</i> -Xylenes	1.00	0.03	0.11	0.02
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	0.27	0.06
<i>o</i> -Xylene	1.00	0.03	0.10	0.02
Styrene	1.00	0.03	0.15	0.03
Tetrachloroethene	1.00	0.03	0.06	0.01
Toluene	1.00	0.03	0.43	0.10
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	0.05	0.01 J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	0.03	0.004

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-25.D

Signature: 

Jack D. Fox PhD, Technical Director

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 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 107798**

**Field Location: Outdoor Air**

Client Project Number: Not Indicated

Client Job Site: ANG

**Sample Type: Active Outdoor Air - Backup Tube**

**Lab Sample Number: 1351**

Date Sampled: 1/10/11

Date Received: 1/14/11

Date Analyzed: 1/19/11

Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	ND	
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	
Benzene	1.00	0.03	0.05	0.01 B
Bromodichloromethane	1.00	0.03	ND	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	ND	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107798  
**Field Location:** Outdoor Air  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type:** Active Outdoor Air - Backup Tube

**Lab Sample Number:** 1351  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	
<i>m,p</i> -Xylenes	1.00	0.03	ND	
Methyl acetate	1.00	0.03	0.08	0.02 B
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-20.D

Signature: 

Jack D. Fox PhD, Technical Director

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4-Mar-2011

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Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: GO122076  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #1 (Before Samples)  
Dilution Factor: 1

Lab Sample Number: 1353  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

Analyte	Mass on Tube
1,1,1-Trichloroethane	Not Detected
1,1,2,2-Tetrachloroethane	Not Detected
1,1,2-Trichloroethane	Not Detected
1,1,2-Trichlorotrifluoroethane	Not Detected
1,1-Dichloroethane	Not Detected
1,1-Dichloroethene	Not Detected
1,2,4-Trichlorobenzene	Not Detected
1,2-Dibromo-3-chloropropane	Not Detected
1,2-Dibromoethane	Not Detected
1,2-Dichlorobenzene	Not Detected
1,2-Dichloroethane	Not Detected
1,2-Dichloropropane	Not Detected
1,3-Dichlorobenzene	Not Detected
1,4-Dichlorobenzene	Not Detected
Benzene	Not Detected
Bromodichloromethane	Not Detected
Bromoform	Not Detected
Carbon disulfide	Not Detected
Carbon tetrachloride	Not Detected
Chlorobenzene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: GO122076  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #1 (Before Samples)  
Dilution Factor: 1

Lab Sample Number: 1353  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

<u>Analyte</u>	<u>Mass on Tube</u>
Chloroform	Not Detected
cis -1,2-Dichloroethene	Not Detected
cis -1,3-Dichloropropene	Not Detected
Cyclohexane	Not Detected
Dibromochloromethane	Not Detected
Ethylbenzene	Not Detected
Isopropylbenzene	Not Detected
m,p -Xylenes	Not Detected
Methyl acetate	Not Detected
Methyl tert -butyl ether	Not Detected
Methylcyclohexane	Not Detected
Methylene chloride	Not Detected
o -Xylene	Not Detected
Styrene	Not Detected
Tetrachloroethene	Not Detected
Toluene	Not Detected
trans -1,2-Dichloroethene	Not Detected
trans -1,3-Dichloropropene	Not Detected
Trichloroethene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Data File: 011911-15.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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4-Mar-2011

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Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: GO125865  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #2 (After Samples)  
Dilution Factor: 1

Lab Sample Number: 1354  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

Analyte	Mass on Tube
1,1,1-Trichloroethane	Not Detected
1,1,2,2-Tetrachloroethane	Not Detected
1,1,2-Trichloroethane	Not Detected
1,1,2-Trichlorotrifluoroethane	Not Detected
1,1-Dichloroethane	Not Detected
1,1-Dichloroethene	Not Detected
1,2,4-Trichlorobenzene	Not Detected
1,2-Dibromo-3-chloropropane	Not Detected
1,2-Dibromoethane	Not Detected
1,2-Dichlorobenzene	Not Detected
1,2-Dichloroethane	Not Detected
1,2-Dichloropropane	Not Detected
1,3-Dichlorobenzene	Not Detected
1,4-Dichlorobenzene	Not Detected
Benzene	1
Bromodichloromethane	Not Detected
Bromoform	Not Detected
Carbon disulfide	Not Detected
Carbon tetrachloride	Not Detected
Chlorobenzene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Signature:   
Jack D. Fox PhD, Technical Director

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phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: GO125865  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #2 (After Samples)  
Dilution Factor: 1

Lab Sample Number: 1354  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

Analyte	Mass on Tube
Chloroform	Not Detected
cis -1,2-Dichloroethene	Not Detected
cis -1,3-Dichloropropene	Not Detected
Cyclohexane	Not Detected
Dibromochloromethane	Not Detected
Ethylbenzene	Not Detected
Isopropylbenzene	Not Detected
m,p -Xylenes	Not Detected
Methyl acetate	1
Methyl tert -butyl ether	Not Detected
Methylcyclohexane	Not Detected
Methylene chloride	Not Detected
o -Xylene	Not Detected
Styrene	Not Detected
Tetrachloroethene	Not Detected
Toluene	Not Detected
trans -1,2-Dichloroethene	Not Detected
trans -1,3-Dichloropropene	Not Detected
Trichloroethene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Data File: 011911-28.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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Volatiles and Semivolatiles Characterization  
Office: 16015 Lomond Shores, Kendall, NY 14476 USA

Rev 0 Effective 15 Apr 2008

### COMPENDIUM METHOD TO-17 FIELD TEST DATA SHEET (FTDS)

#### I. General Information

Project: ANG - Hancock Date(s) Sampled: 1/10-11/11  
 Site: Ram Tech Engineering Time Period Sampled: 8:45 PM to  
 Location: 6100 Fairway Drive - Syracuse Operator: David W. Myers / Rob Seuts  
 Instrument Model No.: \_\_\_\_\_ Calibrated By: JF  
 Pump Serial No.: 19478 (Sub-slab) Rotameter Serial No.: 217763-1  
19201 (SS duplicate) Rain:  Yes  No  
19051 (upwind)  
 Sampling Tube Adsorbent Cartridge Information

Tube Type: Stainless Steel  
 Adsorbent(s): TA/CG1TD/CG5TD

#### II. Sampling Data

Tube ID	Sampling Location	Ambient Temp. (°F)	Ambient Pressure (in. Hg)	Pre-Sampling Flow Rate (mL/min)	Initial Sampling Time	Post-Sampling Flow Rate (mL/min)	Final Sampling Time	Total Time (min)	Mean Flow Rate (mL/min)	Total Sample Volume (mL) <sup>1</sup>
* 107795	Sub-slab	70°F	30.12	18-22	1-10-11 8:40 PM	20-24	1-11-11 8:40	1440	21	30,240
107796	↓	↓	↓	18-22	↓	↓	↓	↓	↓	↓
* 140415	Sub-slab Duplicate	↓	↓	20-24	1-10-11 8:45 PM	22-26	1-11-11 8:45	1440	22	31,680
140416	↓	↓	↓	20-24	↓	↓	↓	↓	↓	↓
* 107799	Upwind	0-20°F	↓	20-30	1-10-11 9:05 PM	20-26	1-11-11 9:10	1445	<del>25</del> 24	<del>36,125</del> 34,680
107798	↓	↓	↓	20-30	↓	↓	↓	↓	↓	↓

\* First Tube

#### III. Field Audit

Do all pre- and post-air sampling flow rates agree to within 10%?  Yes  No  
 If not, list the relevant tube IDs here: \_\_\_\_\_

Are any apparent total sampling volumes greater than 5000 mL?  Yes  No  
 If so, list the relevant tube IDs here: All tubes

<sup>1</sup> This will be verified using the rotameter calibration at the Analytical Laboratory.



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Rev 0 Effective 15 Apr 2008

### COMPENDIUM METHOD TO-17 FIELD TEST DATA SHEET (FTDS)

#### I. General Information

Project: ANG - Hancock Date(s) Sampled: 1/10 - 11/11  
Site: RAM Tech Engineering Time Period Sampled: 8:50 PM to  
Location: 6100 Fairway Drive - Syracuse Operator: David W. Myers / Rob Seals  
Instrument Model No.: \_\_\_\_\_ Calibrated By: JF  
Pump Serial No.: 19060 (Indoor Air) Rotameter Serial No.: 217763-1  
17737 (IA Dup) Rain:  Yes  No

#### Sampling Tube Adsorbent Cartridge Information

Tube Type: Stainless Steel  
Adsorbent(s): TA / CG1 TD / GG5 TD

#### II. Sampling Data

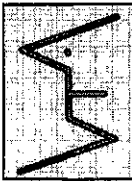
Tube ID	Sampling Location	Ambient Temp. (°F)	Ambient Pressure (in. Hg)	Pre-Sampling Flow Rate (mL/min)	Initial Sampling Time	Post-Sampling Flow Rate (mL/min)	Final Sampling Time	Total Time (min)	Mean Flow Rate (mL/min)	Total Sample Volume (mL) <sup>1</sup>
* 140403	Indoor Air	70°F	30.12	18-22	1-10-11 8:50 PM	20-24	1-11-11 8:50	1440	21	30,240
140401	↓	↓	↓	18-22	↓	↓	↓	↓	↓	↓
* 107793	IA Dup	↓	↓	20-22	1-10-11 8:55 PM	20-24	1-11-11 8:55	1440	22	31,680
107797	↓	↓	↓	20-22	↓	↓	↓	↓	↓	↓
GO 122035	Active Field Blank	70°F	↓	N/A	1-10-11 1-11-11					

#### III. Field Audit

Do all pre- and post-air sampling flow rates agree to within 10%?  Yes  No  
If not, list the relevant tube IDs here: \_\_\_\_\_

Are any apparent total sampling volumes greater than 5000 mL?  Yes  No  
If so, list the relevant tube IDs here: All tubes, except field blank (122035)

<sup>1</sup> This will be verified using the rotameter calibration at the Analytical Laboratory.



**Vapor Trail Analytics**

179 Lake Avenue  
 Rochester, New York 14608 USA  
 Phone: (585) 727-2865  
 2025

PROJECT/SITE:

Stratospheric Performance

**CHAIN OF CUSTODY RECORD**

SEND REPORT TO:

PERSON/COMPANY: Dave Myers / ERM  
 ADDRESS: 5788 Wickertons Parkway  
 CITY: DeWitt STATE: NY ZIP: 13214  
 PHONE: FAX: 315-233-3038 / 315-445-2543  
 EMAIL: Dave.Myers@ERM.com

SEND INVOICE TO:

PERSON/COMPANY:  
 ADDRESS:  
 CITY: Same STATE:  
 PHONE: FAX:  
 EMAIL:  
 Quotation #

LAB PROJECT #: 201102  
 CLIENT PROJECT #:  
 REQUESTED TURNAROUND TIME  
 STD SAME DAY  
 1 2 3 4 5  
 10

**REQUESTED ANALYSIS**

Sample Identification	Sample Date	Sample Time (PM)	Sample Type	Matrix	Number Containers	Remarks	VTA Sample Number
1 140408-140408 LF	1/10/11	8:50	active 24hr	Indoor Air	X	Indoor Air	1342
2 140415-140416		8:45		Sub-slab	X	Sub-slab Dup.	1344
3 107795-107796		8:40		Sub-slab	X	Sub-slab	1346
4 107793-107797		8:55		Indoor Air	X	Indoor Air Dup.	1340
5 107799-107798		9:05		Sub-slab	X	Ext. - Upwind	1350
6 140412 (active field blank)		9:00	Passive 30-Day		X	30-day Passive	
7 60122035 (active field blank)		8:35	Passive blank	Blank	X	Active Field Blank	1352
8 60122028		9:00	Passive blank	Blank	X	Passive Field Blank	
9 60122008		9:00	Passive 30-Day			30-day Passive Duplicate	
10 140411 140420 (active)						LB1 LB2 (active)	1353 1354

Sample Condition: Per NELAC/E LAP 210/241/242/243/244

Receipt Parameter NELAC Compliance

Temperature: 22°C N/A Y  N   
 Holding Time: 4 days N/A Y  N

General Comments:  
 Note 30 day passive sample period ends 2/9/2011

**Receiving:**

Sampled By: [Signature] Date/Time: 01/11/10  
 Relinquished By: [Signature] Date/Time: 1/12/10  
 Received By: G. Gernder Date/Time: 1/14/10 0939  
 Received At Lab By: [Signature] Date/Time: 1/14/10 1105





*Volatiles and Semi-Volatiles Characterization*

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

7-Apr-2011

## **Analytical Results Report Cover Sheet**

For VTA Project Number 201112

Total Number of Pages Including This Cover: 8

Please refer to the bottom of each page for identification of the individual page number.

The results in this report refer to samples collected by the Client.

Results from samples collected by the Client or an associated party relate to the samples or components within as received by the laboratory.

This report is part of a multipart document, and should only be evaluated in its entirety. Partial reproduction is prohibited without the prior written consent of Vapor Trail Analytics LLC. Please refer to the chain of custody for additional sample information.

Any deviations from, additions to, exclusions from, or non-standard conditions that may affect the quality of the results are communicated in the report in text or qualifier form. The following data qualifiers are defined and, where necessary, are utilized on an individual analyte basis in the report:

- B The method blank contained trace levels of analyte; refer to the method blank report.
- E The calibration limit was exceeded; the associated numerical value is the approximate concentration of analyte in the sample.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of analyte in the sample.
- UJ The analyte was not detected at or above the Reporting Limit; however the associated numerical value is the approximate concentration of analyte in the sample.



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
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7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Analysis Report for Air

Field ID Number: GO125843  
Field Location: Passive Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1450  
Dates Sampled: 2/7-3/8/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	Reporting Limit ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )
1,1,1-Trichloroethane	0.06	1.55
1,2-Dichloroethane	0.05	0.10
Benzene	0.22	1.04
Chloroform	0.05	0.17
Cyclohexane	0.05	1.47
Ethylbenzene	0.11	0.55
Isopropylbenzene	0.05	0.11
m,p-Xylenes	0.08	1.10
Methyl acetate	0.05	0.22
Methylcyclohexane	0.05	1.64
o-Xylene	0.05	0.79
Styrene	0.24	ND
Tetrachloroethylene	0.05	0.27
Toluene	0.05	3.10
Trichloroethylene	0.10	0.31

Comments:  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter. ND = Not Detected.

Data File: 032311-18.D

Signature:   
Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Tentatively Identified Compounds in Air


Field ID Number: GO125843  
Field Location: Passive Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1450  
Dates Sampled: 2/7-3/8/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

<u>Compound</u>	(ng) <u>Mass on Tube</u>	( $\mu\text{g}\cdot\text{m}^{-3}$ ) <u>Estimated Concentration</u>
1,1-Difluoroethane	33	1.61
2-Methylbutane	18	0.88
Acetic acid	87	4.25
Aliphatic C <sub>9</sub> Hydrocarbons	16	0.78
Ethanol	52	2.54
Ethyl acetate	7	0.35
Hexanal	9	0.44
Limonene	13	0.64
Methenamine	6	0.29
Methylcyclopentane	39	1.91
n-Decane	7	0.34
n-Heptane	18	0.88
Nonanal	10	0.49
n-Pentane	14	0.68
Pentanal	8	0.39
tert-Butyl alcohol	9	0.44
Trichlorofluoromethane	7	0.34
Trimethylpentanes	17	0.83

Comments: ng = nanograms.

Data File: 032311-18.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

**NYSDOH ELAP ID Number: 11932**  
**Analytical Method: Modified USEPA TO-17**

**Sampling Method: ASTM D6196-03 (Axial Diffusive)**

### Analysis Report for Air

**Field ID Number: GO124449**  
**Field Location: Duplicate Passive Indoor Air**  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

**Lab Sample Number: 1451**  
Dates Sampled: 2/7-3/8/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	Reporting Limit ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )
1,1,1-Trichloroethane	0.06	1.42
1,2-Dichloroethane	0.05	0.09
Benzene	0.22	1.02
Chloroform	0.05	0.17
Cyclohexane	0.05	1.36
Ethylbenzene	0.11	0.50
Isopropylbenzene	0.05	0.10
m,p-Xylenes	0.08	0.95
Methyl acetate	0.05	0.17
Methylcyclohexane	0.05	1.39
o-Xylene	0.05	0.68
Styrene	0.24	ND
Tetrachloroethylene	0.05	0.25
Toluene	0.05	2.56
Trichloroethylene	0.10	0.27

Comments:  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter. ND = Not Detected.

Data File: 032311-19.D

Signature:   
Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Tentatively Identified Compounds in Air

Field ID Number: GO124449  
Field Location: Duplicate Passive Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1451  
Dates Sampled: 2/7-3/8/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

<u>Compound</u>	<u>(ng)</u> <u>Mass on Tube</u>	<u>(µg·m<sup>-3</sup>)</u> <u>Estimated Concentration</u>
1,1-Difluoroethane	34	1.66
2,2,4-Trimethylpentane	5	0.24
2-Methylbutane	19	0.93
Acetic acid	59	2.88
Ethanol	23	1.12
Ethyl acetate	7	0.35
Hexanal	6	0.29
Limonene	13	0.64
Methyl salicylate	6	0.29
Methylcyclopentane	47	2.30
n-Decane	11	0.54
n-Heptane	13	0.64
Nonanal	10	0.49
n-Pentane	14	0.68
Pentanal	8	0.39
tert-Butyl alcohol	9	0.44
Trichlorofluoromethane	6	0.29
Trimethylpentanes	14	0.68
Undecane	16	0.8

Comments: ng = nanograms.

Data File: 032311-19.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
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7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Field Blank Report for Air

Field ID Number: GO157992  
Field Location: Passive Blank  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Field Blank for Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1449  
Date Sampled: 2/7/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	5.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	5.0	ND
Tetrachloroethylene	1.0	ND
Toluene	1.0	ND
Trichloroethylene	2.0	ND

Comments: ng = nanograms. ND = Not Detected.

Data File: 032311-17.D

Signature: Jack D. Fox  
Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO158987

Field Location: NA

Client Project Number: Not Indicated

Client Job Site: ANG Hancock - Ramtech Engineering

Sample Type: Lab Method Blank #1 (Before Samples)

Dilution Factor: 1

Lab Sample Number: 1452

Date Sampled: NA

Date Received: 3/14/11

Date Analyzed: 3/23/11

Lab Project Number: 201112

<u>Analyte</u>	<u>Reporting Limit</u> (ng)	<u>Mass on Tube</u> (ng)
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	5.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	5.0	ND
Tetrachloroethylene	1.0	ND
Toluene	1.0	ND
Trichloroethylene	2.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 032311-16.D

Signature:   
Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

Please refer to the included chain of custody for additional sample information.



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO158930  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Lab Method Blank #2 (After Samples)  
Dilution Factor: 1

Lab Sample Number: 1453  
Date Sampled: NA  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	5.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	5.0	ND
Tetrachloroethylene	1.0	ND
Toluene	1.0	ND
Trichloroethylene	2.0	ND

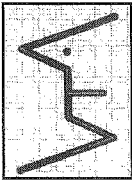
Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 032311-20.D

Signature:   
Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.  
Please refer to the included chain of custody for additional sample information.





**Vapor Trail Analytics**

Stratospheric Performance

**CHAIN OF CUSTODY RECORD**

179 Lake Avenue  
Rochester, New York 14608 USA  
Phone: (585) 727-2865

PROJECT/SITE: **ANG Hancock**  
**Ramtech Engineering**

SEND REPORT TO:

PERSON/COMPANY: **Rob Sants 1ERM**  
ADDRESS: **5788 Widewaters Parkway**  
CITY: **Dewitt** STATE: **NY** ZIP: **13214**  
PHONE: **FAX: 315-233-3038 / 315-448-2543**  
EMAIL: **Robert.Sants@ERM.com**

SEND INVOICE TO:

PERSON/COMPANY:  
ADDRESS:  
CITY: **Sam C** STATE: ZIP:  
PHONE: FAX:  
EMAIL: **Dave.Myers@ERM.com**

LAB PROJECT #: **201112** CLIENT PROJECT #:  
REQUESTED TURNAROUND TIME  
STD  SAME DAY  **10**

Quotation #

REQUESTED ANALYSIS

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Number Containers	Remarks	VTA Sample Number
1 G0157992	2/7/2011 6:55	2/7/2011 7:00	Blank	Indoor Air	1		1449
2 G0125843	↓	3/8/2011 6:55	Passive Indoor Air	↓	1		1450
3 G0124449	↓	↓	Duplicate Passive Indoor Air	↓	1		1451
4-G0158928 <sup>ab</sup>	↓	↓					1452
5-G0158954	↓	↓					1453
6							
7							
8							
9							
10							

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter

Temperature: **23°C**

Holding Time: **1 Day**

General Comments:

Receiving:

Received By: *[Signature]* Date/Time: **3/14/11 17:15**  
Relinquished By: *[Signature]* Date/Time: **3/14/11 17:15**

Received By: *[Signature]* Date/Time: **3/15/11 12:00**  
Received At Lab By: *[Signature]* Date/Time: **3/15/11 12:00**

*APPENDIX C*  
*QA/QC EVALUATION RESULTS*

---



**DATA USABILITY SUMMARY REPORT (DUSR)  
ANG HANCOCK FIELD - SITE 15  
SYRACUSE, NEW YORK  
GROUND WATER SAMPLE ANALYSES  
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)  
PROJECT NUMBER 0116255  
TEST AMERICA LABORATORIES, INC.  
SAMPLE DELIVERY GROUP (SDG) NUMBER 0J05456**

***Deliverables:***

The above referenced data package for eighteen (18) ground water samples, one (1) blind field duplicate sample, two (2) trip blanks, one (1) equipment blank, and one (1) matrix spike/matrix spike duplicate (MS/MSD) sample contains all required deliverables as stipulated under the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) for Category B deliverables.

The sample specific analyses included benzene, ethylbenzene and xylene (BEX) analyzed by United States Environmental Protection Agency (USEPA) SW-846 Method 8260B in accordance with "Test Methods for Evaluating Solid Wastes, SW-846 Third Edition, Final Update III, December 1996". Note that the samples were also analyzed for other compounds in addition to BEX; however, this DUSR has been prepared to address BEX only.

The data have been validated according to the protocols and quality control (QC) requirements of the ASP; the National Functional Guidelines for Organic Data Review (October 1999); the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-24, Revision 2, October 2006: Validating Volatile Organic Compounds by SW-846 Method 8260B; and the reviewer's professional judgment.

The validation report pertains to the following ground water samples collected on 4 and 5 October 2010:

**Samples**

ANG-MW-5 (10/2010)	ANG-MW-16 (10/2010)	ANG-MW-101 (10/2010)
ANG-MW-18 (10/2010)	ANG-RW-1 (10/2010)	ANG-MW-17 (10/2010)
ANG-MW-108 (10/2010)	ANG-MW-14 (10/2010)	ANG-MW-19 (10/2010)
ANG-MW-102 (10/2010)	ANG-MW-22 (10/2010)	ANG-MW-8 (10/2010)

Samples (continued)

ANG-MW-109 (10/2010)    ANG-MW-3 (10/2010)    ANG-MW-15 (10/2010)  
ANG-MW-2 (10/2010)    ANG-MW-4 (10/2010)    ANG-MW-11 (10/2010)

QC Samples

ANG-DUP-01 (10/2010) - blind field duplicate of sample ANG-MW-19 (10/2010)  
ANG-MW-108 (10/2010) MS/MSD  
TB-01 - collected 10/4/2010  
ANG-Trip Blank-02 (10/2010) - collected 10/5/2010  
ANG-EB-01 (10/2010) - collected 10/4/2010

**Organics**

The following items/criteria were reviewed for this report:

- Case narrative and deliverables compliance
- Holding times and sample preservation (including pH and temperature)
- Surrogate Compound recoveries, summary and data
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) results, recoveries, summary and data
- Laboratory Check Sample (LCS), recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- Trip Blank sample results
- Blind Field Duplicate sample results
- Organic analysis data sheets (Form I)
- GC/MS and GC chromatograms, mass spectra and quantitation reports
- Quantitation/detection limits
- Qualitative and quantitative compound identification

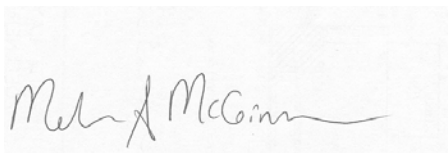
The items listed above were technically and contractually in compliance with SW-846 protocols with the exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

### *Volatiles*

- Several samples were run at dilutions due to high levels of target and/or non-target compounds, causing elevated reporting limits. The laboratory has reported the final result only on the Form I. No qualification of the sample data is required; however, the data user should be aware of the elevated detection limits.
- Benzene was not detected in sample ANG-MW-19 (10/2010), but was detected in the associated blind field duplicate, ANG-DUP-01 (10/2010). The benzene results for both the sample and the duplicate have been reported on the data tables. The concentration of benzene in each sample is considered estimated and qualified "ND J" for the non-detection and "J" for the positive result.

### *Package Summary:*

All data are valid and usable with qualifications as noted in this review.



Signed:

\_\_\_\_\_  
Melissa A. McGinnis  
Project Scientist

Dated: 21 March 2010

Environmental Resources Management Inc

Client Sample ID: ANG-MW-5(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-001    Work Order #...: L71FK1AA    Matrix.....: WG  
 Date Sampled...: 10/04/10 11:05    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-18(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-002    Work Order #...: L71FT1AA    Matrix.....: WG  
 Date Sampled...: 10/04/10 12:05    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-108(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-003    Work Order #...: L71FV1AA    Matrix.....: WG  
Date Sampled...: 10/04/10 14:25    Date Received...: 10/05/10  
Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
Prep Batch #...: 0286476  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)



Environmental Resources Management Inc

Client Sample ID: ANG-MW-102(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-004 Work Order #...: L71F11AA Matrix.....: WG  
Date Sampled...: 10/04/10 16:05 Date Received...: 10/05/10  
Prep Date.....: 10/12/10 Analysis Date...: 10/12/10  
Prep Batch #...: 0286476  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-109(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-005    Work Order #...: L71F41AA    Matrix.....: WG  
Date Sampled...: 10/04/10 16:20    Date Received...: 10/05/10  
Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
Prep Batch #...: 0286476  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-2(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-006    Work Order #...: L71F61AA    Matrix.....: WG  
 Date Sampled...: 10/04/10 17:05    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-EB-01(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J050456-007    Work Order #...: L71F71AA    Matrix.....: WQ  
 Date Sampled...: 10/04/10 17:10    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: TB-01

GC/MS Volatiles

Lot-Sample #...: A0J050456-008    Work Order #...: L71F81AA    Matrix.....: WQ  
 Date Sampled...: 10/04/10    Date Received...: 10/05/10  
 Prep Date.....: 10/12/10    Analysis Date...: 10/12/10  
 Prep Batch #...: 0286476  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-16(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-001    Work Order #...: L72WX1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 08:45    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0286479  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-RW-1(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-002    Work Order #...: L72W41AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 09:10    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	3.8	1.0	ug/L
Xylenes (total)	2.8	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-14(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-003 Work Order #...: L72W51AA Matrix.....: WG  
 Date Sampled...: 10/05/10 10:05 Date Received...: 10/06/10  
 Prep Date.....: 10/13/10 Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	1.7	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)



Environmental Resources Management Inc

Client Sample ID: ANG-MW-22(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-004    Work Order #...: L72W61AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 10:15    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-3(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-005    Work Order #...: L72W71AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 13:10    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-4(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-006    Work Order #...: L72W81AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 13:25    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-101(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-007    Work Order #...: L72W91AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 11:20    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0286479  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	3.2	1.0	ug/L
Xylenes (total)	2.0	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-17(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-008    Work Order #...: L72XA1AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 14:30    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0287174  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	0.95 J	1.0	ug/L
Xylenes (total)	1.2 J	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE (S) :

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-19(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-009    Work Order #...: L72XC1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 14:25    Date Received...: 10/06/10  
Prep Date.....: 10/14/10    Analysis Date...: 10/14/10  
Prep Batch #...: 0288153  
Dilution Factor: 6.25    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND <b>J</b>	6.2	ug/L
Ethylbenzene	100	6.2	ug/L
Xylenes (total)	18	12	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-8(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-010    Work Order #...: L72XE1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 15:40    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0287174  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-15(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-011    Work Order #...: L72XF1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 15:50    Date Received...: 10/06/10  
Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
Prep Batch #...: 0287174  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	5.3	1.0	ug/L
Ethylbenzene	9.8	1.0	ug/L
Xylenes (total)	0.72 J	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	107	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

**NOTE (S) :**

J Estimated result. Result is less than RL.



Environmental Resources Management Inc

Client Sample ID: ANG-MW-11(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-012    Work Order #...: L72XG1AA    Matrix.....: WG  
 Date Sampled...: 10/05/10 16:50    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0287174  
 Dilution Factor: 1.67    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	26	1.7	ug/L
Ethylbenzene	7.8	1.7	ug/L
Xylenes (total)	9.5	3.3	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	106	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

Environmental Resources Management Inc

Client Sample ID: ANG-DUP-01(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-013    Work Order #...: L72XH1AA    Matrix.....: WG  
Date Sampled...: 10/05/10 16:00    Date Received...: 10/06/10  
Prep Date.....: 10/14/10    Analysis Date...: 10/14/10  
Prep Batch #...: 0288153  
Dilution Factor: 5    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	2.7 J	5.0	ug/L
Ethylbenzene	120	5.0	ug/L
Xylenes (total)	24	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	105	(74 - 116)

**NOTE (S) :**

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-TRIPBLANK-02(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J060452-014    Work Order #...: L72XJ1AA    Matrix.....: WQ  
 Date Sampled...: 10/05/10    Date Received...: 10/06/10  
 Prep Date.....: 10/13/10    Analysis Date...: 10/13/10  
 Prep Batch #...: 0287174  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)



**DATA USABILITY SUMMARY REPORT (DUSR)  
ANG HANCOCK FIELD - SITE 15  
SYRACUSE, NEW YORK  
GROUND WATER SAMPLE ANALYSES  
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)  
PROJECT NUMBER 0116255  
TEST AMERICA LABORATORIES, INC.  
SAMPLE DELIVERY GROUP (SDG) NUMBER 0J13535**

***Deliverables:***

The above referenced data package for twelve (12) ground water samples, one (1) blind field duplicate sample, two (2) trip blanks, one (1) equipment blank, and one (1) matrix spike/matrix spike duplicate (MS/MSD) sample contains all required deliverables as stipulated under the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) for Category B deliverables.

The sample specific analyses included benzene, ethylbenzene and xylene (BEX) analyzed by United States Environmental Protection Agency (USEPA) SW-846 Method 8260B in accordance with "Test Methods for Evaluating Solid Wastes, SW-846 Third Edition, Final Update III, December 1996". Note that the samples were also analyzed for other compounds in addition to BEX; however, this DUSR has been prepared to address BEX only.

The data have been validated according to the protocols and quality control (QC) requirements of the ASP; the National Functional Guidelines for Organic Data Review (October 1999); the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-24, Revision 2, October 2006: Validating Volatile Organic Compounds by SW-846 Method 8260B; and the reviewer's professional judgment.

The validation report pertains to the following ground water samples collected on 12 and 13 October 2010:

**Samples**

ANG-MW-9 (10/2010)	ANG-MW-105 (10/2010)	ANG-MW-111 (10/2010)
ANG-MW-20 (10/2010)	ANG-MW-106 (10/2010)	ANG-MW-112 (10/2010)
ANG-MW-103 (10/2010)	ANG-MW-107 (10/2010)	ANG-MW-113 (10/2010)
ANG-MW-104 (10/2010)	ANG-MW-110 (10/2010)	ANG-MW-114 (10/2010)

### QC Samples

ANG-Dup-02 (10/2010) - blind field duplicate of sample ANG-MW-112 (10/2010)  
ANG-MW-106 (10/2010) MS/MSD  
ANG-Trip Blank-03 (10/2010) - collected 10/12/2010  
ANG-Trip Blank-04 (10/2010) - collected 10/13/2010  
ANG-EB-02 (10/2010) - collected 10/12/2010

### *Organics*

The following items/criteria were reviewed for this report:

- Case narrative and deliverables compliance
- Holding times and sample preservation (including pH and temperature)
- Surrogate Compound recoveries, summary and data
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) results, recoveries, summary and data
- Laboratory Check Sample (LCS), recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- Trip Blank sample results
- Blind Field Duplicate sample results
- Organic analysis data sheets (Form I)
- GC/MS and GC chromatograms, mass spectra and quantitation reports
- Quantitation/detection limits
- Qualitative and quantitative compound identification

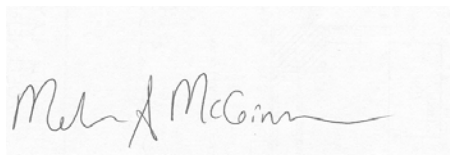
The items listed above were technically and contractually in compliance with SW-846 protocols with the exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

### *Volatiles*

- No qualification of the sample data is required.

*Package Summary:*

All data are valid and usable with qualifications as noted in this review.

A rectangular box containing a handwritten signature in black ink. The signature is cursive and appears to read "Melissa A. McGinnis".

Signed:

\_\_\_\_\_  
Melissa A. McGinnis  
Project Scientist

Dated: 10 March 2010

Environmental Resources Management Inc

Client Sample ID: ANG-TRIPBLANK-03(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-001    Work Order #...: L8EM01AA    Matrix.....: WQ  
 Date Sampled...: 10/12/10    Date Received...: 10/13/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	82	(75 - 121)
1,2-Dichloroethane-d4	90	(63 - 129)
Toluene-d8	89	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-EB-02(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-002 Work Order #...: L8EM31AA Matrix.....: WG  
 Date Sampled...: 10/12/10 10:30 Date Received...: 10/13/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	84	(75 - 121)
1,2-Dichloroethane-d4	88	(63 - 129)
Toluene-d8	93	(74 - 115)
4-Bromofluorobenzene	94	(66 - 117)



Environmental Resources Management Inc

Client Sample ID: ANG-MW-9(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-003    Work Order #...: L8EN81AA    Matrix.....: WG  
 Date Sampled...: 10/12/10 11:25    Date Received...: 10/13/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	84	(75 - 121)
1,2-Dichloroethane-d4	87	(63 - 129)
Toluene-d8	91	(74 - 115)
4-Bromofluorobenzene	91	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-20(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-004 Work Order #...: L8EPA1AA Matrix.....: WG  
 Date Sampled...: 10/12/10 12:35 Date Received...: 10/13/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	84	(75 - 121)
1,2-Dichloroethane-d4	86	(63 - 129)
Toluene-d8	89	(74 - 115)
4-Bromofluorobenzene	90	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-114(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-005    Work Order #...: L8EPD1AA    Matrix.....: WG  
 Date Sampled...: 10/12/10 15:05    Date Received...: 10/13/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	85	(75 - 121)
1,2-Dichloroethane-d4	87	(63 - 129)
Toluene-d8	89	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-113(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J130535-006 Work Order #...: L8EPE1AA Matrix.....: WG  
 Date Sampled...: 10/12/10 16:05 Date Received...: 10/13/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0298401  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	83	(75 - 121)
1,2-Dichloroethane-d4	86	(63 - 129)
Toluene-d8	92	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-TRIP BLANK-04 (10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-001    Work Order #...: L8G0X1AA    Matrix.....: WQ  
 Date Sampled...: 10/13/10    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	114	(63 - 129)
Toluene-d8	101	(74 - 115)
4-Bromofluorobenzene	90	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-DUP-02(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-002    Work Order #...: L8G021AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 16:00    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.35 J	1.0	ug/L
Ethylbenzene	9.5	1.0	ug/L
Xylenes (total)	2.4	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(75 - 121)
1,2-Dichloroethane-d4	112	(63 - 129)
Toluene-d8	102	(74 - 115)
4-Bromofluorobenzene	93	(66 - 117)

NOTE (S) :

J Estimated result. Result is less than RL.

Environmental Resources Management Inc

Client Sample ID: ANG-MW-111(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-003    Work Order #...: L8G061AA    Matrix.....: WG  
Date Sampled...: 10/13/10 12:40    Date Received...: 10/14/10  
Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	102	(75 - 121)
1,2-Dichloroethane-d4	114	(63 - 129)
Toluene-d8	102	(74 - 115)
4-Bromofluorobenzene	91	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-112(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-004 Work Order #...: L8G091AA Matrix.....: WG  
 Date Sampled...: 10/13/10 11:45 Date Received...: 10/14/10  
 Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.36 J	1.0	ug/L
Ethylbenzene	10	1.0	ug/L
Xylenes (total)	2.7	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	103	(74 - 115)
4-Bromofluorobenzene	95	(66 - 117)

NOTE (S) :

J Estimated result. Result is less than RL.



Environmental Resources Management Inc

Client Sample ID: ANG-MW-106(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-005    Work Order #...: L8G1D1AA    Matrix.....: WG  
Date Sampled...: 10/13/10 09:35    Date Received...: 10/14/10  
Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	103	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-107(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-006    Work Order #...: L8G1X1AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 11:05    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	112	(63 - 129)
Toluene-d8	100	(74 - 115)
4-Bromofluorobenzene	87	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-104(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-007    Work Order #...: L8G131AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 12:05    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	103	(75 - 121)
1,2-Dichloroethane-d4	111	(63 - 129)
Toluene-d8	103	(74 - 115)
4-Bromofluorobenzene	89	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-110(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-008    Work Order #...: L8G151AA    Matrix.....: WG  
Date Sampled...: 10/13/10 13:40    Date Received...: 10/14/10  
Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	103	(75 - 121)
1,2-Dichloroethane-d4	113	(63 - 129)
Toluene-d8	104	(74 - 115)
4-Bromofluorobenzene	86	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-105(10/2010)

GC/MS Volatiles

Lot-Sample #...: A0J140547-009    Work Order #...: L8G161AA    Matrix.....: WG  
 Date Sampled...: 10/13/10 14:50    Date Received...: 10/14/10  
 Prep Date.....: 10/22/10    Analysis Date...: 10/22/10  
 Prep Batch #...: 0297044  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	5.5	1.0	ug/L
Ethylbenzene	97	1.0	ug/L
Xylenes (total)	92	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	98	(75 - 121)
1,2-Dichloroethane-d4	108	(63 - 129)
Toluene-d8	101	(74 - 115)
4-Bromofluorobenzene	96	(66 - 117)

Environmental Resources Management Inc

Client Sample ID: ANG-MW-103(10/2010)

GC/MS Volatiles

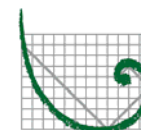
Lot-Sample #...: A0J140547-010 Work Order #...: L8G171AA Matrix.....: WG  
Date Sampled...: 10/13/10 15:55 Date Received...: 10/14/10  
Prep Date.....: 10/22/10 Analysis Date...: 10/22/10  
Prep Batch #...: 0297044  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	0.24 J	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	100	(75 - 121)
1,2-Dichloroethane-d4	110	(63 - 129)
Toluene-d8	100	(74 - 115)
4-Bromofluorobenzene	91	(66 - 117)

**NOTE (S) :**

J Estimated result. Result is less than RL.



**ERM**

**DATA USABILITY SUMMARY REPORT (DUSR)  
ANG HANCOCK FIELD - SITE 15  
SYRACUSE, NEW YORK  
AIR SAMPLE ANALYSES  
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)  
PROJECT NUMBER 0116255  
VAPOR TRAIL ANALYTICS, LLC (VTA)  
SAMPLE DELIVERY GROUP (SDG) NUMBER 201102**

***Deliverables:***

The above referenced data package for ten (10) air samples and two (2) method blank samples contains all the required deliverables as stipulated under the 2005 New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B deliverables. The samples were analyzed for volatile organics following United States Environmental Protection Agency (USEPA) Method TO-17. The data have been evaluated according to the protocols and quality control (QC) requirements of the ASP, the National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region 2 Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Volatile Organic Analysis of Ambient Air in canister by Method TO-15, and the reviewer's professional judgment.

This report pertains to the following air samples collected on 10 January 2011:

**Samples**

140403	Active Indoor Air - Front Tube
140401	Active Indoor Air - Backup Tube
140415	Active Sub-Slab - Front Tube
140416	Active Sub-Slab - Backup Tube
107795	Active Sub-Slab - Front Tube
107796	Active Sub-Slab - Backup Tube
107793	Active Indoor Air - Front Tube
107797	Active Indoor Air - Backup Tube
107799	Active Outdoor Air - Front Tube
107798	Active Outdoor Air - Backup Tube

**QC Samples**

140411	Lab Method Blank #1 (Before Samples)
140420	Lab Method Blank #2 (After Samples)

The following items/criteria were reviewed:

- Case narrative and deliverable compliance
- Chain-of-Custody (COC)
- Holding times
- Sorbent tube cleaning summary and data
- Surrogate compound recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- Report of Analysis data sheets (Form I)
- GC/MS chromatograms, mass spectra and quantitation reports
- Quantitation/reporting limits
- Qualitative and quantitative compound identification

The items listed above were in compliance with the analytical methods and with the ASP and USEPA criteria with the exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

- At the request of ERM, the passive samples listed on the Chain-of-Custody (COC) were not analyzed by the laboratory due to a field sampling error. These samples included: 140412, GO122035, GO122028 and GO122008. No qualification of the sample data is required.
- Sample 107795 was analyzed at a dilution factor of 1.11. No qualification of the sample data is required, and the reporting limit was not affected.
- Benzene (1 ng) and methyl acetate (1 ng) were positively identified in Lab Method Blank #2 (140420); this blank was analyzed after the samples. Benzene and methyl acetate were positively identified in several of the samples analyzed as part of this SDG; however, based on the levels of these detections, it is ERM's professional opinion that qualification of the sample data is not required.
- In several samples, positive concentrations of certain analytes were detected in the backup sampling tubes. Method TO-17



defines breakthrough as when 5% or more of the concentration of one or more analytes detected in the primary tube (i.e., front tube) is detected in the backup tube. Per the method, the sum of the concentrations was reported on the data tables when breakthrough occurred between 5% and 66%. Method TO-17 defines a safe sample volume as 2/3 or 66%. Per the method, the average of the concentrations in the front and backup tubes was reported on the data tables if the concentration in the backup tube was greater than 66% of the concentration in the front tube. No qualification of the sample data is required.

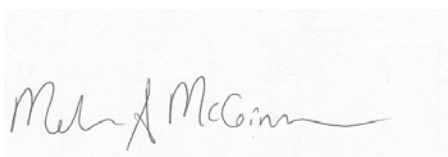
- The following table lists compounds that exceeded 30 percent relative standard deviation (%RSD) for relative response factors (RRF) in the initial calibration (ICAL) and compounds that exceeded 30 percent difference (%D) between the ICAL average RRF and the continuing calibration verification (CCV) RRF. Calibrations applicable to QC samples only have not been included. Associated field samples are also listed. Positive results for these compounds in the associated samples are considered estimated and qualified "J" and non-detect results are qualified "ND J". Exceptions are noted below.

Calibration	Compound	Deficiency	Associated Samples
ICAL 1/19/2011	trans-1,2-dichloroethene 1,2,4-trichlorobenzene	%RSD = 30.57 <sup>1</sup> %RSD = 31.11 <sup>1</sup>	All samples
CCV 1/20/2011 @ 1:11	trans-1,2-dichloroethene 1,1,2-trichlorotrifluoroethane	%D = - 63.7 %D = - 51.8	All samples

<sup>1</sup>Two exceptions are allowed up to limit of ±40%. Therefore, no qualification of the sample data is required in this instance.

**Package Summary:**

All data are valid and usable with qualifications as noted in this review.



Signed:

\_\_\_\_\_  
Melissa A. McGinnis  
Project Scientist

Dated: 15 June 2011



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
 Tel: (585) 727-2825  
 www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 140403**  
**Field Location: Indoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1342**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.40	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	0.45	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	2.10	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	0.05	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	0.10	
1,2-Dichloropropane	1.00	0.03	0.03	
1,3-Dichlorobenzene	1.00	0.03	0.13	
1,4-Dichlorobenzene	1.00	0.03	0.12	
Benzene	1.00	0.03	0.77	B
Bromodichloromethane	1.00	0.03	0.04	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	0.72	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
 Tel: (585) 727-2825  
 www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140403**  
**Field Location: Indoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1342**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	0.25	0.05
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	3.52	1.00
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.25	0.06
Isopropylbenzene	1.00	0.03	0.04	0.01
<i>m,p</i> -Xylenes	1.00	0.03	0.53	0.12
Methyl acetate	1.00	0.03	0.10	0.03 B
Methylcyclohexane	1.00	0.03	3.62	0.88
<i>o</i> -Xylene	1.00	0.03	0.22	0.05
Styrene	1.00	0.03	0.30	0.07
Tetrachloroethene	1.00	0.03	0.38	0.05
Toluene	1.00	0.03	1.31	0.34
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	0.03	0.005

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-21.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 140401**  
**Field Location: Indoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Backup Tube**

**Lab Sample Number: 1343**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )	( $\mu\text{g}\cdot\text{m}^{-3}$ )	(ppbv)	Qualifiers
		RL	Result	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND	J
1,1-Dichloroethane	1.00	0.03	ND	ND	
1,1-Dichloroethene	1.00	0.03	ND	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND	
1,2-Dibromoethane	1.00	0.03	ND	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	ND	
1,2-Dichloroethane	1.00	0.03	ND	ND	
1,2-Dichloropropane	1.00	0.03	ND	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	ND	
Benzene	1.00	0.03	ND	ND	
Bromodichloromethane	1.00	0.03	ND	ND	
Bromoform	1.00	0.03	ND	ND	
Carbon tetrachloride	1.00	0.03	ND	ND	
Chlorobenzene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number:** 140401  
**Field Location:** Indoor Air  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type:** Active Indoor Air - Backup Tube

**Lab Sample Number:** 1343  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	ND
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	ND	ND
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	ND	ND
Isopropylbenzene	1.00	0.03	ND	ND
<i>m,p</i> -Xylenes	1.00	0.03	ND	ND
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	ND	ND
<i>o</i> -Xylene	1.00	0.03	ND	ND
Styrene	1.00	0.03	ND	ND
Tetrachloroethene	1.00	0.03	ND	ND
Toluene	1.00	0.03	ND	ND
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-16.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 140415**  
**Field Location: Sub-Slab Duplicate**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Front Tube**

**Lab Sample Number: 1344**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.07	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.30	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	ND	
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	
Benzene	1.00	0.03	0.24	B
Bromodichloromethane	1.00	0.03	ND	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	ND	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 140415  
Field Location: Sub-Slab Duplicate  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Sub-Slab - Front Tube

Lab Sample Number: 1344  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	RL	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result (ppbv)	Qualifiers
Chloroform	1.00	0.03	0.04	0.01	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	0.36	0.10	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	0.20	0.05	
Isopropylbenzene	1.00	0.03	ND	ND	
m,p -Xylenes	1.00	0.03	0.10	0.02	
Methyl acetate	1.00	0.03	0.08	0.02	B
Methylcyclohexane	1.00	0.03	0.51	0.12	
o -Xylene	1.00	0.03	0.06	0.01	
Styrene	1.00	0.03	1.49	0.34	
Tetrachloroethene	1.00	0.03	0.10	0.01	
Toluene	1.00	0.03	0.39	0.10	
trans -1,2-Dichloroethene	1.00	0.03	0.13	0.03	J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-22.D

BB  
30 3/31/11

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 140416**  
**Field Location: Sub-Slab Duplicate**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Backup Tube**

**Lab Sample Number: 1345**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.03	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.04	0.005 J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	ND	
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	
Benzene	1.00	0.03	0.03	0.01 B
Bromodichloromethane	1.00	0.03	ND	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	ND	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140416**  
**Field Location: Sub-Slab Duplicate**  
Client Project Number: Not Indicated  
Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Backup Tube**

**Lab Sample Number: 1345**  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	RL	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result (ppbv)	Qualifiers
Chloroform	1.00	0.03	0.17	0.04	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	ND	ND	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	ND	ND	
Isopropylbenzene	1.00	0.03	ND	ND	
m,p -Xylenes	1.00	0.03	ND	ND	
Methyl acetate	1.00	0.03	ND	ND	
Methylcyclohexane	1.00	0.03	ND	ND	
o -Xylene	1.00	0.03	ND	ND	
Styrene	1.00	0.03	ND	ND	
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	ND	ND	
trans -1,2-Dichloroethene	1.00	0.03	0.03	0.01	J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-17.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140416**  
**Field Location: Sub-Slab**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Front Tube**

**Lab Sample Number: 1346**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.11	0.03	0.29	0.05
1,1,2,2-Tetrachloroethane	1.11	0.03	ND	ND
1,1,2-Trichloroethane	1.11	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.11	0.03	1.06	0.14 J
1,1-Dichloroethane	1.11	0.03	ND	ND
1,1-Dichloroethene	1.11	0.03	ND	ND
1,2,4-Trichlorobenzene	1.11	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.11	0.03	0.20	0.02
1,2-Dibromoethane	1.11	0.03	ND	ND
1,2-Dichlorobenzene	1.11	0.03	ND	ND
1,2-Dichloroethane	1.11	0.03	ND	ND
1,2-Dichloropropane	1.11	0.03	ND	ND
1,3-Dichlorobenzene	1.11	0.03	ND	ND
1,4-Dichlorobenzene	1.11	0.03	0.04	0.01
Benzene	1.11	0.03	0.34	0.10 B
Bromodichloromethane	1.11	0.03	ND	ND
Bromoform	1.11	0.03	ND	ND
Carbon tetrachloride	1.11	0.03	3.53	0.55
Chlorobenzene	1.11	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 140416**  
**Field Location: Sub-Slab**  
Client Project Number: Not Indicated  
Client Job Site: ANG  
**Sample Type: Active Sub-Slab - Front Tube**

**Lab Sample Number: 1346**  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	RL	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result (ppbv)	Qualifiers
Chloroform	1.11	0.03	0.06	0.01	
<i>cis</i> -1,2-Dichloroethene	1.11	0.03	ND	ND	
Cyclohexane	1.11	0.03	0.76	0.22	
Dibromochloromethane	1.11	0.03	ND	ND	
Ethylbenzene	1.11	0.03	0.51	0.12	
Isopropylbenzene	1.11	0.03	ND	ND	
<i>m,p</i> -Xylenes	1.11	0.03	0.20	0.04	
Methyl acetate	1.11	0.03	ND	ND	
Methylcyclohexane	1.11	0.03	0.91	0.22	
<i>o</i> -Xylene	1.11	0.03	0.12	0.03	
Styrene	1.11	0.03	2.12	0.49	
Tetrachloroethene	1.11	0.03	0.14	0.02	
Toluene	1.11	0.03	0.57	0.15	
<i>trans</i> -1,2-Dichloroethene	1.11	0.03	0.33	0.08	J
<i>trans</i> -1,3-Dichloropropene	1.11	0.03	0.08	0.02	
Trichloroethene	1.11	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.  
Data Files: 013111-6.D

Signature:   
Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107796  
**Field Location:** Sub-Slab  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type:** Active Sub-Slab - Backup Tube

**Lab Sample Number:** 1347  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.25	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	ND	
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	
Benzene	1.00	0.03	ND	
Bromodichloromethane	1.00	0.03	ND	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	ND	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107796  
Field Location: Sub-Slab  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Sub-Slab - Backup Tube

Lab Sample Number: 1347  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	RL	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result (ppbv)	Qualifiers
Chloroform	1.00	0.03	0.03	0.01	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	ND	ND	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	ND	ND	
Isopropylbenzene	1.00	0.03	ND	ND	
m,p -Xylenes	1.00	0.03	ND	ND	
Methyl acetate	1.00	0.03	ND	ND	
Methylcyclohexane	1.00	0.03	ND	ND	
o -Xylene	1.00	0.03	ND	ND	
Styrene	1.00	0.03	ND	ND	
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	ND	ND	
trans -1,2-Dichloroethene	1.00	0.03	0.10	0.02	J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-18.D

Signature:

Jack D. Fox PhD, Technical Director

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 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107793**  
**Field Location: Indoor Air Duplicate**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1348**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.44	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	2.47	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	0.03	0.003
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	0.11	0.03
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	0.15	0.03
Benzene	1.00	0.03	0.74	0.23 B
Bromodichloromethane	1.00	0.03	0.03	0.004
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	0.73	0.11
Chlorobenzene	1.00	0.03	ND	

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phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107793  
Field Location: Indoor Air Duplicate  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Active Indoor Air - Front Tube

Lab Sample Number: 1348  
Date Sampled: 1/10/11  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	0.26	0.05
cis -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	2.55	0.73
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.28	0.06
Isopropylbenzene	1.00	0.03	0.06	0.01
m,p -Xylenes	1.00	0.03	0.27	0.06
Methyl acetate	1.00	0.03	0.13	0.04 B
Methylcyclohexane	1.00	0.03	3.28	0.80
o-Xylene	1.00	0.03	0.25	0.06
Styrene	1.00	0.03	0.99	0.23
Tetrachloroethene	1.00	0.03	0.36	0.05
Toluene	1.00	0.03	1.19	0.31
trans -1,2-Dichloroethene	1.00	0.03	ND	ND J
trans -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	0.04	0.01

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-24.D

Signature:

Jack D. Fox PhD, Technical Director

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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107797**  
**Field Location: Indoor Air Duplicate**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Indoor Air - Backup Tube**

**Lab Sample Number: 1349**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND J
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107797  
**Field Location:** Indoor Air Duplicate  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type:** Active Indoor Air - Backup Tube

**Lab Sample Number:** 1349  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	
<i>m,p</i> -Xylenes	1.00	0.03	ND	
Methyl acetate	1.00	0.03	ND	
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-19.D

Signature: 

Jack D. Fox PhD, Technical Director

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4-Mar-2011

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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number:** 107799  
**Field Location:** Outdoor Air  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type:** Active Outdoor Air - Front Tube

**Lab Sample Number:** 1350  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	0.04	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	2.11	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	0.08	
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	
Benzene	1.00	0.03	0.56	B
Bromodichloromethane	1.00	0.03	ND	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	0.69	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
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 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number:** 107799  
**Field Location:** Outdoor Air  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type:** Active Outdoor Air - Front Tube

**Lab Sample Number:** 1350  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	0.07	0.01
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	0.18	0.05
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	0.09	0.02
Isopropylbenzene	1.00	0.03	ND	ND
<i>m,p</i> -Xylenes	1.00	0.03	0.11	0.02
Methyl acetate	1.00	0.03	ND	ND
Methylcyclohexane	1.00	0.03	0.27	0.06
<i>o</i> -Xylene	1.00	0.03	0.10	0.02
Styrene	1.00	0.03	0.15	0.03
Tetrachloroethene	1.00	0.03	0.06	0.01
Toluene	1.00	0.03	0.43	0.10
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	0.05	0.01 J
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	0.03	0.004

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
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Data Files: 011911-25.D

Signature: 

Jack D. Fox PhD, Technical Director

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 5788 Widewaters Parkway  
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 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107798**  
**Field Location: Outdoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Outdoor Air - Backup Tube**

**Lab Sample Number: 1351**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.03	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	J
1,1-Dichloroethane	1.00	0.03	ND	
1,1-Dichloroethene	1.00	0.03	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	
1,2-Dibromoethane	1.00	0.03	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	
1,2-Dichloroethane	1.00	0.03	ND	
1,2-Dichloropropane	1.00	0.03	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	
Benzene	1.00	0.03	0.05	0.01 B
Bromodichloromethane	1.00	0.03	ND	
Bromoform	1.00	0.03	ND	
Carbon tetrachloride	1.00	0.03	ND	
Chlorobenzene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

**Analysis Report for Air**

**Field ID Number: 107798**  
**Field Location: Outdoor Air**  
 Client Project Number: Not Indicated  
 Client Job Site: ANG  
**Sample Type: Active Outdoor Air - Backup Tube**

**Lab Sample Number: 1351**  
 Date Sampled: 1/10/11  
 Date Received: 1/14/11  
 Date Analyzed: 1/19/11  
 Lab Project Number: 201102

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	
m,p -Xylenes	1.00	0.03	ND	
Methyl acetate	1.00	0.03	0.08	0.02 B
Methylcyclohexane	1.00	0.03	ND	
o -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	ND J
trans -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 011911-20.D

Signature: 

Jack D. Fox PhD, Technical Director

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Client: ERM, Inc.  
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5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: ~~60122076~~ <sup>140411 3/31</sup> <sub>B13</sub>  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #1 (Before Samples)  
Dilution Factor: 1

Lab Sample Number: 1353  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

<u>Analyte</u>	<u>Mass on Tube</u>
1,1,1-Trichloroethane	Not Detected
1,1,2,2-Tetrachloroethane	Not Detected
1,1,2-Trichloroethane	Not Detected
1,1,2-Trichlorotrifluoroethane	Not Detected
1,1-Dichloroethane	Not Detected
1,1-Dichloroethene	Not Detected
1,2,4-Trichlorobenzene	Not Detected
1,2-Dibromo-3-chloropropane	Not Detected
1,2-Dibromoethane	Not Detected
1,2-Dichlorobenzene	Not Detected
1,2-Dichloroethane	Not Detected
1,2-Dichloropropane	Not Detected
1,3-Dichlorobenzene	Not Detected
1,4-Dichlorobenzene	Not Detected
Benzene	Not Detected
Bromodichloromethane	Not Detected
Bromoform	Not Detected
Carbon disulfide	Not Detected
Carbon tetrachloride	Not Detected
Chlorobenzene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Signature: Jack D. Fox  
Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

4-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

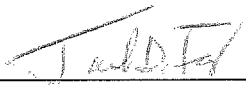
Field ID Number: ~~60122076~~ 140411 3/31  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #1 (Before Samples)  
Dilution Factor: 1

Lab Sample Number: 1353  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

<u>Analyte</u>	<u>Mass on Tube</u>
Chloroform	Not Detected
cis -1,2-Dichloroethene	Not Detected
cis -1,3-Dichloropropene	Not Detected
Cyclohexane	Not Detected
Dibromochloromethane	Not Detected
Ethylbenzene	Not Detected
Isopropylbenzene	Not Detected
m,p -Xylenes	Not Detected
Methyl acetate	Not Detected
Methyl tert -butyl ether	Not Detected
Methylcyclohexane	Not Detected
Methylene chloride	Not Detected
o -Xylene	Not Detected
Styrene	Not Detected
Tetrachloroethene	Not Detected
Toluene	Not Detected
trans -1,2-Dichloroethene	Not Detected
trans -1,3-Dichloropropene	Not Detected
Trichloroethene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Data File: 011911-15.D

Signature:   
Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: ~~60125865~~ <sup>140420 BB</sup> <sub>3/31</sub>  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #2 (After Samples)  
Dilution Factor: 1

Lab Sample Number: 1354  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

Analyte	Mass on Tube
1,1,1-Trichloroethane	Not Detected
1,1,2,2-Tetrachloroethane	Not Detected
1,1,2-Trichloroethane	Not Detected
1,1,2-Trichlorotrifluoroethane	Not Detected
1,1-Dichloroethane	Not Detected
1,1-Dichloroethene	Not Detected
1,2,4-Trichlorobenzene	Not Detected
1,2-Dibromo-3-chloropropane	Not Detected
1,2-Dibromoethane	Not Detected
1,2-Dichlorobenzene	Not Detected
1,2-Dichloroethane	Not Detected
1,2-Dichloropropane	Not Detected
1,3-Dichlorobenzene	Not Detected
1,4-Dichlorobenzene	Not Detected
Benzene	1
Bromodichloromethane	Not Detected
Bromoform	Not Detected
Carbon disulfide	Not Detected
Carbon tetrachloride	Not Detected
Chlorobenzene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Signature:

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

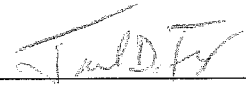
Field ID Number: ~~60125865~~ <sup>140430 BB</sup> 3/31  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG  
Sample Type: Lab Method Blank #2 (After Samples)  
Dilution Factor: 1

Lab Sample Number: 1354  
Date Sampled: NA  
Date Received: 1/14/11  
Date Analyzed: 1/19/11  
Lab Project Number: 201102  
(ng)

<u>Analyte</u>	<u>Mass on Tube</u>
Chloroform	Not Detected
cis -1,2-Dichloroethene	Not Detected
cis -1,3-Dichloropropene	Not Detected
Cyclohexane	Not Detected
Dibromochloromethane	Not Detected
Ethylbenzene	Not Detected
Isopropylbenzene	Not Detected
m,p -Xylenes	Not Detected
Methyl acetate	1
Methyl tert -butyl ether	Not Detected
Methylcyclohexane	Not Detected
Methylene chloride	Not Detected
o -Xylene	Not Detected
Styrene	Not Detected
Tetrachloroethene	Not Detected
Toluene	Not Detected
trans -1,2-Dichloroethene	Not Detected
trans -1,3-Dichloropropene	Not Detected
Trichloroethene	Not Detected

Comments: ng = nanograms. NA = Not Applicable.

Data File: 011911-28.D

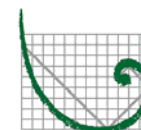
Signature: 

Jack D. Fox PhD, Technical Director

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**ERM**

**DATA USABILITY SUMMARY REPORT (DUSR)  
ANG HANCOCK FIELD - SITE 15  
SYRACUSE, NEW YORK  
AIR SAMPLE ANALYSES  
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)  
PROJECT NUMBER 0116255  
VAPOR TRAIL ANALYTICS LLC, (VTA)  
SAMPLE DELIVERY GROUP (SDG) NUMBER 201108**

***Deliverables:***

The above referenced data package for eleven (11) air samples, two (2) field blank samples, and four (4) method blank samples contains all the required deliverables as stipulated under the 2005 New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B deliverables. The samples were analyzed for volatile organics following United States Environmental Protection Agency (USEPA) Method TO-17. The data have been evaluated according to the protocols and quality control (QC) requirements of the ASP, the National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region 2 Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Volatile Organic Analysis of Ambient Air in canister by Method TO-15, and the reviewer's professional judgment.

The validation report pertains to the following air samples collected from 7 February through 11 February 2011:

**Samples**

107792	Active Sub-Slab Vapor - Front Tube
120013	Active Sub-Slab Vapor - Backup Tube
107800	Active Sub-Slab Vapor - Front Tube
120012	Active Sub-Slab Vapor - Backup Tube
107791	Active Indoor Air - Front Tube
120016	Active Indoor Air - Backup Tube
107796	Active Indoor Air - Front Tube
120020	Active Indoor Air - Backup Tube
107798	Active Outdoor Air - Front Tube
120018	Active Outdoor Air - Backup Tube
GO122008	Long-Term Passive Indoor Air

QC Samples

107797	Field Blank for Active Sampling
120011	Lab Method Blank #1 (Before Samples)
140420	Lab Method Blank #2 (After Samples)
GO122028	Field Blank for Passive Indoor Air
GO122005	Lab Method Blank #1 (Before Samples)
GO122047	Lab Method Blank #2 (After Samples)

The following items/criteria were reviewed:

- Case narrative and deliverable compliance
- Chain-of-Custody (COC)
- Holding times
- Sorbent tube cleaning summary and data
- Surrogate compound recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- Report of Analysis data sheets (Form I)
- GC/MS chromatograms, mass spectra and quantitation reports
- Quantitation/reporting limits
- Qualitative and quantitative compound identification

The items listed above were in compliance with the analytical methods and with the ASP and USEPA criteria with the exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

- At the request of ERM, sample MI140412 (passive 30-day indoor air sample) listed on the Chain-of-Custody (COC) was not analyzed by the laboratory due to a field sampling error. No qualification of the sample data is required.
- Sample GO122008 (passive 30-day indoor air sample) was analyzed twice by the laboratory, but no analyte signals were obtained, despite the fact that the field blank analysis was normal. No results were therefore reported by the laboratory for this sample.

- Several parameters in samples 107791 and 120016 were analyzed at varying dilution factors. No qualification of the sample data is required, and the reporting limits were not affected.
- Toluene (1.1 ng) was positively identified in Lab Method Blank #2 (140420); this blank was analyzed after the samples. Toluene was positively identified in several of the associated samples; however, based on the levels of these detections, it is ERM's professional opinion that qualification of the sample data is not required.
- Benzene (2.5 ng) was positively identified in Lab Method Blank #1 (GO122005); this blank was analyzed before the samples. Benzene was positively identified in one of the associated samples; however, based on the level of this detection, it is ERM's professional opinion that qualification of the sample data is not required.
- In several samples, positive concentrations of certain analytes were detected in the backup sampling tubes. Method TO-17 defines breakthrough as when 5% or more of the concentration of one or more analytes detected in the primary tube (i.e., front tube) is detected in the backup tube. Per the method, the sum of the concentrations was reported on the data tables when breakthrough occurred between 5% and 66%. Method TO-17 defines a safe sample volume as 2/3 or 66%. Per the method, the average of the concentrations in the front and backup tubes was reported on the data tables if the concentration in the backup tube was greater than 66% of the concentration in the front tube. No qualification of the sample data is required.
- The following table lists compounds that exceeded 30 percent relative standard deviation (%RSD) for relative response factors (RRF) in the initial calibration (ICAL) and compounds that exceeded 30 percent difference (%D) between the ICAL average RRF and the continuing calibration verification (CCV) RRF. Calibrations applicable to QC samples only have not been included. Associated field samples are also listed. Positive results for these compounds in the associated samples are considered estimated and qualified "J" and non-detect results are qualified "ND J" (exceptions are noted below). Also, compounds that exceeded  $\pm 90$  %D in the CCV are rejected per

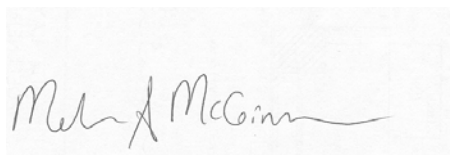
the method and qualified "R" for positive detections in the associated samples.

Calibration	Compound	Deficiency	Associated Samples
ICAL (active) 2/28/2011	1,2-dibromo-3-chloropropane	%RSD = 30.53 <sup>1</sup>	Active samples
	1,2,4-trichlorobenzene	%RSD = 33.58 <sup>1</sup>	
ICAL (passive) 2/15/2011	methyl acetate	%RSD = 51.17	Passive samples
	benzene	%RSD = 32.30 <sup>1</sup>	
	styrene	%RSD = 82.13	
CCV (active) 2/28/2011 @ 17:37	trichloroethene	%D = - 284.5	Active samples
	bromoform	%D = - 106.4	
	styrene	%D = - 55.8	
	1,1,2,2-tetrachloroethane	%D = - 155.3	
	isopropylbenzene	%D = - 31.2	
	1,3-dichlorobenzene	%D = - 130.0	
	1,4-dichlorobenzene	%D = - 139.9	
	1,2-dichlorobenzene	%D = - 150.3	
CCV (passive) 2/15/2011 @ 23:58	styrene	%D = 59.4	Passive samples
CCV (passive) 2/21/2011 @ 22:42	1,1,1-trichloroethane	%D = - 69.1	Passive samples

<sup>1</sup>Two exceptions are allowed up to limit of ±40%. Therefore, no qualification of the sample data is required in this instance.

**Package Summary:**

All data are valid and usable with qualifications as noted in this review.



Signed: \_\_\_\_\_

Melissa A. McGinnis  
Project Scientist

Dated: 15 June 2011



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25-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107792  
 Field Location: Sub-Slab  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
 Sample Type: Active Sub-Slab Vapor - Front Tube

Lab Sample Number: 1408  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

Analyte	DF	RL	Result	Result	Qualifiers
1,1,1-Trichloroethane	1.00	0.03	0.36	0.07	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.76	0.10	
1,1-Dichloroethane	1.00	0.03	ND	ND	
1,1-Dichloroethene	1.00	0.03	ND	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND	
1,2-Dibromoethane	1.00	0.03	ND	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	ND	
1,2-Dichloroethane	1.00	0.03	ND	ND	
1,2-Dichloropropane	1.00	0.03	ND	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	ND	
1,4-Dichlorobenzene	1.00	0.03	0.22	0.04	
Benzene	1.00	0.07	0.50	0.15	
Bromodichloromethane	1.00	0.03	ND	ND	
Bromoform	1.00	0.03	ND	ND	
Carbon tetrachloride	1.00	0.03	ND	ND	
Chlorobenzene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107792

Field Location: Sub-Slab

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Active Sub-Slab Vapor - Front Tube

Lab Sample Number: 1408

Date Sampled: 2/7-8/11

Date Received: 2/11/11

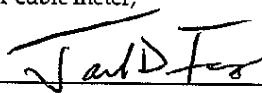
Date Analyzed: 2/28/11

Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )	( $\mu\text{g}\cdot\text{m}^{-3}$ )	(ppbv)	Qualifiers
		RL	Result	Result	
Chloroform	1.00	0.03	0.17	0.04	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	0.12	0.03	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	3.34	0.75	
Isopropylbenzene	1.00	0.03	ND	ND	J
m,p -Xylenes	1.00	0.07	1.25	0.28	
Methyl acetate	1.00	0.17	ND	ND	
Methylcyclohexane	1.00	0.03	0.13	0.03	
o -Xylene	1.00	0.03	0.52	0.12	
Styrene	1.00	0.03	3.60	0.83	J
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	1.08	0.28	B
trans -1,2-Dichloroethene	1.00	0.03	ND	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.11	0.02	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-22.D

Signature: 

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120013**  
**Field Location: Sub-Slab**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Sub-Slab Vapor - Back-up Tube**

**Lab Sample Number: 1409**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

Analyte	DF	RL	Result	Result	Qualifiers
1,1,1-Trichloroethane	1.00	0.03	ND	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.05	0.01	
1,1-Dichloroethane	1.00	0.03	ND	ND	
1,1-Dichloroethene	1.00	0.03	ND	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND	
1,2-Dibromoethane	1.00	0.03	ND	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	ND	
1,2-Dichloroethane	1.00	0.03	ND	ND	
1,2-Dichloropropane	1.00	0.03	ND	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	ND	
Benzene	1.00	0.07	ND	ND	
Bromodichloromethane	1.00	0.03	ND	ND	
Bromoform	1.00	0.03	ND	ND	
Carbon tetrachloride	1.00	0.03	ND	ND	
Chlorobenzene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 120013  
 Field Location: Sub-Slab  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
 Sample Type: Active Sub-Slab Vapor - Back-up Tube

Lab Sample Number: 1409  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )		Qualifiers
		RL	Result	
Chloroform	1.00	0.03	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
m,p -Xylenes	1.00	0.07	ND	
Methyl acetate	1.00	0.17	ND	
Methylcyclohexane	1.00	0.03	ND	
o -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	0.04	0.01 R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-17.D

Signature: 

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 107800**  
**Field Location: Sub-Slab Dupe**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Sub-Slab Vapor - Front Tube**

**Lab Sample Number: 1410**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 3/17/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Result</u>	<u>Result</u>	<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>			
1,1,1-Trichloroethane	1.00	0.03	0.29	0.05		
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND		
1,1,2-Trichloroethane	1.00	0.03	ND	ND		
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND		
1,1-Dichloroethane	1.00	0.03	ND	ND		
1,1-Dichloroethene	1.00	0.03	ND	ND		
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND		
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND		
1,2-Dibromoethane	1.00	0.03	ND	ND		
1,2-Dichlorobenzene	1.00	0.03	ND	ND		
1,2-Dichloroethane	1.00	0.03	ND	ND		
1,2-Dichloropropane	1.00	0.03	ND	ND		
1,3-Dichlorobenzene	1.00	0.03	0.08	0.01	R	
1,4-Dichlorobenzene	1.00	0.03	0.08	0.01	R	
Benzene	1.00	0.03	ND	ND		
Bromodichloromethane	1.00	0.03	ND	ND		
Bromoform	1.00	0.03	ND	ND		
Carbon tetrachloride	1.00	0.03	ND	ND		
Chlorobenzene	1.00	0.03	ND	ND		

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107800

Field Location: Sub-Slab Dupe

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Active Sub-Slab Vapor - Front Tube

Lab Sample Number: 1410

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 3/21/11

Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>	
		<u>RL</u>	<u>Result</u>		<u>Result</u>
Chloroform	1.00	0.03	0.36	0.07	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	ND	ND	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	1.31	0.30	
Isopropylbenzene	1.00	0.03	0.06	0.01	J
<i>m,p</i> -Xylenes	1.00	0.03	0.58	0.13	
Methyl acetate	1.00	0.03	ND	ND	
Methylcyclohexane	1.00	0.03	ND	ND	
<i>o</i> -Xylene	1.00	0.03	0.28	0.06	
Styrene	1.00	0.03	1.12	0.26	J
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	0.44	0.11	B
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 032111-6.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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Client: ERM, Inc.  
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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 120012

Field Location: Sub-Slab Dupe

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Active Sub-Slab Vapor - Back-up Tube

Lab Sample Number: 1411

Date Sampled: 2/7-8/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.06	0.01
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 120012**  
**Field Location: Sub-Slab Dupe**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Sub-Slab Vapor - Back-up Tube**

**Lab Sample Number: 1411**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
<i>m,p</i> -Xylenes	1.00	0.07	ND	
Methyl acetate	1.00	0.18	ND	
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-18.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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25-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

Field ID Number: 107791

Lab Sample Number: 1412

Field Location: Indoor Air

Date Sampled: 2/7-8/11

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 3/17/11

Sample Type: Active Indoor Air - Front Tube

Lab Project Number: 201108

Analyte	DF	$(\mu\text{g}\cdot\text{m}^{-3})$		Qualifiers
		RL	Result	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	0.06	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number:** 107791  
**Field Location:** Indoor Air  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Indoor Air - Front Tube

**Lab Sample Number:** 1412  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
<i>m,p</i> -Xylenes	0.06	0.03	ND	
Methyl acetate	0.15	0.03	ND	
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 031711-6.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120016**

**Field Location: Indoor Air**

**Client Project Number: 0116255.2A**

**Client Job Site: ANG DGI - Ramtech VI**

**Sample Type: Active Indoor Air - Back-up Tube**

**Lab Sample Number: 1413**

**Date Sampled: 2/7-8/11**

**Date Received: 2/11/11**

**Date Analyzed: 2/28/11**

**Lab Project Number: 201108**

<u>Analyte</u>	<u>DF</u>	<u>RL</u>	<u>Result</u>	<u>Result</u>	<u>Qualifiers</u>
			( $\mu\text{g}\cdot\text{m}^{-3}$ )	( $\mu\text{g}\cdot\text{m}^{-3}$ )	(ppbv)
1,1,1-Trichloroethane	1.00	0.03	ND	ND	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND	
1,1-Dichloroethane	1.00	0.03	ND	ND	
1,1-Dichloroethene	1.00	0.03	ND	ND	
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND	
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND	
1,2-Dibromoethane	1.00	0.03	ND	ND	
1,2-Dichlorobenzene	1.00	0.03	ND	ND	
1,2-Dichloroethane	1.00	0.03	ND	ND	
1,2-Dichloropropane	1.00	0.03	ND	ND	
1,3-Dichlorobenzene	1.00	0.03	ND	ND	
1,4-Dichlorobenzene	1.00	0.03	ND	ND	
Benzene	0.06	0.03	ND	ND	
Bromodichloromethane	1.00	0.03	ND	ND	
Bromoform	1.00	0.03	ND	ND	
Carbon tetrachloride	1.00	0.03	ND	ND	
Chlorobenzene	1.00	0.03	ND	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

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 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120016**  
**Field Location: Indoor Air**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Indoor Air - Back-up Tube**

**Lab Sample Number: 1413**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	ND	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	
Cyclohexane	1.00	0.03	ND	
Dibromochloromethane	1.00	0.03	ND	
Ethylbenzene	1.00	0.03	ND	
Isopropylbenzene	1.00	0.03	ND	J
<i>m,p</i> -Xylenes	0.06	0.03	ND	
Methyl acetate	0.15	0.03	ND	
Methylcyclohexane	1.00	0.03	ND	
<i>o</i> -Xylene	1.00	0.03	ND	
Styrene	1.00	0.03	ND	J
Tetrachloroethene	1.00	0.03	ND	
Toluene	1.00	0.03	ND	
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	
Trichloroethene	1.00	0.03	ND	

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
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Data Files: 022811-19.D

Signature: Jack D. Fox

Jack D. Fox PhD, Technical Director

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 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number: 107796**  
**Field Location: Indoor Air Dupe**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Indoor Air - Front Tube**

**Lab Sample Number: 1414**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 3/17/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.04	0.21	0.04
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.74	0.09
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.08	0.02
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	0.15	0.03 R
Benzene	1.00	0.07	0.81	0.25
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	0.27	0.04
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

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 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

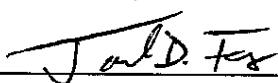
**Field ID Number:** 107796  
**Field Location:** Indoor Air Dupe  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Indoor Air - Front Tube

**Lab Sample Number:** 1414  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )	( $\mu\text{g}\cdot\text{m}^{-3}$ )	(ppbv)	Qualifiers
		RL	Result	Result	
Chloroform	1.00	0.04	0.18	0.04	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	0.76	0.22	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	0.43	0.10	
Isopropylbenzene	1.00	0.03	0.07	0.01	J
m,p -Xylenes	1.00	0.07	1.06	0.24	
Methyl acetate	1.00	0.18	ND	ND	
Methylcyclohexane	1.00	0.03	0.41	0.10	
o -Xylene	1.00	0.03	0.46	0.10	
Styrene	1.00	0.03	0.51	0.12	J
Tetrachloroethene	1.00	0.03	0.22	0.03	
Toluene	1.00	0.03	1.61	0.42	B
trans -1,2-Dichloroethene	1.00	0.03	0.09	0.02	
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.05	0.01	R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 031711-7.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120020**  
**Field Location: Indoor Air Dupe**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Indoor Air - Back-up Tube**

**Lab Sample Number: 1415**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	ND	ND
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
 Rochester, NY 14608 USA  
 Tel: (585) 727-2825  
 www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120020**  
**Field Location: Indoor Air Dupe**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Indoor Air - Back-up Tube**

**Lab Sample Number: 1415**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
Chloroform	1.00	0.03	ND	ND
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
Cyclohexane	1.00	0.03	ND	ND
Dibromochloromethane	1.00	0.03	ND	ND
Ethylbenzene	1.00	0.03	ND	ND
Isopropylbenzene	1.00	0.03	ND	ND J
<i>m,p</i> -Xylenes	1.00	0.07	ND	ND
Methyl acetate	1.00	0.18	ND	ND
Methylcyclohexane	1.00	0.03	ND	ND
<i>o</i> -Xylene	1.00	0.03	ND	ND
Styrene	1.00	0.03	ND	ND J
Tetrachloroethene	1.00	0.03	ND	ND
Toluene	1.00	0.03	ND	ND
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND
Trichloroethene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-20.D

Signature: 

Jack D. Fox PhD, Technical Director

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Client: ERM, Inc.  
 Report To: Dave Myers  
 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: **11932**  
 Analytical Method: **USEPA TO-17**

### Analysis Report for Air

**Field ID Number:** 107798  
**Field Location:** Ambient Outdoor  
**Client Project Number:** 0116255.2A  
**Client Job Site:** ANG DGI - Ramtech VI  
**Sample Type:** Active Outdoor Air - Front Tube

**Lab Sample Number:** 1416  
**Date Sampled:** 2/7-8/11  
**Date Received:** 2/11/11  
**Date Analyzed:** 3/17/11  
**Lab Project Number:** 201108

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.03	0.04	
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	
1,1,2-Trichloroethane	1.00	0.03	ND	
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.70	0.08
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	0.05	0.01
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.07	0.73	0.21
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	0.04	0.00 R
Carbon tetrachloride	1.00	0.03	0.25	0.04
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
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 5788 Widewaters Parkway  
 Dewitt, New York 13214  
 phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 107798**  
**Field Location: Ambient Outdoor**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Outdoor Air - Front Tube**

**Lab Sample Number: 1416**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 3/17/11  
 Lab Project Number: 201108

<u>Analyte</u>	<u>DF</u>	$(\mu\text{g}\cdot\text{m}^{-3})$		<u>Qualifiers</u>	
		<u>RL</u>	<u>Result</u>		<u>Result</u>
Chloroform	1.00	0.03	0.06	0.01	
<i>cis</i> -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	0.07	0.02	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	0.15	0.03	
Isopropylbenzene	1.00	0.03	ND	ND	J
<i>m,p</i> -Xylenes	1.00	0.07	0.39	0.08	
Methyl acetate	1.00	0.16	ND	ND	
Methylcyclohexane	1.00	0.03	0.21	0.05	
<i>o</i> -Xylene	1.00	0.03	0.15	0.03	
Styrene	1.00	0.03	ND	ND	J
Tetrachloroethene	1.00	0.03	0.11	0.02	
Toluene	1.00	0.03	0.66	0.16	B
<i>trans</i> -1,2-Dichloroethene	1.00	0.03	ND	ND	
<i>trans</i> -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.06	0.01	R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 031711-8.D

Signature: 

Jack D. Fox PhD, Technical Director

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120018**

**Field Location: Ambient Outdoor**

**Client Project Number: 0116255.2A**

**Client Job Site: ANG DGI - Ramtech VI**

**Sample Type: Active Outdoor Air - Back-up Tube**

**Lab Sample Number: 1417**

**Date Sampled: 2/7-8/11**

**Date Received: 2/11/11**

**Date Analyzed: 2/28/11**

**Lab Project Number: 201108**

<u>Analyte</u>	<u>DF</u>	<u>(<math>\mu\text{g}\cdot\text{m}^{-3}</math>)</u>		<u>Qualifiers</u>
		<u>RL</u>	<u>Result</u>	
1,1,1-Trichloroethane	1.00	0.03	ND	ND
1,1,2,2-Tetrachloroethane	1.00	0.03	ND	ND
1,1,2-Trichloroethane	1.00	0.03	ND	ND
1,1,2-Trichlorotrifluoroethane	1.00	0.03	0.05	0.01
1,1-Dichloroethane	1.00	0.03	ND	ND
1,1-Dichloroethene	1.00	0.03	ND	ND
1,2,4-Trichlorobenzene	1.00	0.03	ND	ND
1,2-Dibromo-3-chloropropane	1.00	0.03	ND	ND
1,2-Dibromoethane	1.00	0.03	ND	ND
1,2-Dichlorobenzene	1.00	0.03	ND	ND
1,2-Dichloroethane	1.00	0.03	ND	ND
1,2-Dichloropropane	1.00	0.03	ND	ND
1,3-Dichlorobenzene	1.00	0.03	ND	ND
1,4-Dichlorobenzene	1.00	0.03	ND	ND
Benzene	1.00	0.03	ND	ND
Bromodichloromethane	1.00	0.03	ND	ND
Bromoform	1.00	0.03	ND	ND
Carbon tetrachloride	1.00	0.03	ND	ND
Chlorobenzene	1.00	0.03	ND	ND

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;  
 ppbv = Parts Per Billion by Volume. ND = Not Detected.

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Analysis Report for Air

**Field ID Number: 120018**  
**Field Location: Ambient Outdoor**  
 Client Project Number: 0116255.2A  
 Client Job Site: ANG DGI - Ramtech VI  
**Sample Type: Active Outdoor Air - Back-up Tube**

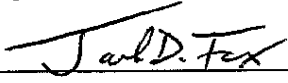
**Lab Sample Number: 1417**  
 Date Sampled: 2/7-8/11  
 Date Received: 2/11/11  
 Date Analyzed: 2/28/11  
 Lab Project Number: 201108

Analyte	DF	( $\mu\text{g}\cdot\text{m}^{-3}$ )	( $\mu\text{g}\cdot\text{m}^{-3}$ )	(ppbv)	Qualifiers
		RL	Result	Result	
Chloroform	1.00	0.03	ND	ND	
cis -1,2-Dichloroethene	1.00	0.03	ND	ND	
Cyclohexane	1.00	0.03	ND	ND	
Dibromochloromethane	1.00	0.03	ND	ND	
Ethylbenzene	1.00	0.03	ND	ND	
Isopropylbenzene	1.00	0.03	ND	ND	J
m,p -Xylenes	1.00	0.03	ND	ND	
Methyl acetate	1.00	0.03	ND	ND	
Methylcyclohexane	1.00	0.03	ND	ND	
o -Xylene	1.00	0.03	ND	ND	
Styrene	1.00	0.03	ND	ND	J
Tetrachloroethene	1.00	0.03	ND	ND	
Toluene	1.00	0.03	ND	ND	
trans -1,2-Dichloroethene	1.00	0.03	ND	ND	
trans -1,3-Dichloropropene	1.00	0.03	ND	ND	
Trichloroethene	1.00	0.03	0.03	0.01	R

Comments: DF = Dilution Factor; RL = Reporting Limit;  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter;

ppbv = Parts Per Billion by Volume. ND = Not Detected.

Data Files: 022811-21.D

Signature: 

Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Field Blank Report for Air

Field ID Number: 107797

Field Location: Active Blank

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Field Blank for Active Sampling

Dilution Factor: 1

Lab Sample Number: 1418

Date Sampled: 2/7/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

<u>Analyte</u>	<u>Reporting Limit</u> (ng)	<u>Mass on Tube</u> (ng)
1,1,1-Trichloroethane	1.0	ND
1,1,2,2-Tetrachloroethane	1.0	ND
1,1,2-Trichloroethane	1.0	ND
1,1,2-Trichlorotrifluoroethane	1.0	ND
1,1-Dichloroethane	1.0	ND
1,1-Dichloroethene	1.0	ND
1,2,4-Trichlorobenzene	1.0	ND
1,2-Dibromo-3-chloropropane	1.0	ND
1,2-Dibromoethane	1.0	ND
1,2-Dichlorobenzene	1.0	ND
1,2-Dichloroethane	1.0	ND
1,2-Dichloropropane	1.0	ND
1,3-Dichlorobenzene	1.0	ND
1,4-Dichlorobenzene	1.0	ND
Benzene	2.0	ND
Bromodichloromethane	1.0	ND
Bromoform	1.0	ND
Carbon disulfide	1.0	ND
Carbon tetrachloride	1.0	ND
Chlorobenzene	1.0	ND

Comments: ng = nanograms. ND = Not Detected

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Volatiles and Semi-Volatiles Characterization

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phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Field Blank Report for Air

Field ID Number: 107797

Field Location: Active Blank

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Field Blank for Active Sampling

Dilution Factor: 1

Lab Sample Number: 1418

Date Sampled: 2/7/11

Date Received: 2/11/11

Date Analyzed: 2/28/11

Lab Project Number: 201108

<u>Analyte</u>	<u>Reporting Limit</u> (ng)	<u>Mass on Tube</u> (ng)
Chloroform	1.0	ND
<i>cis</i> -1,2-Dichloroethene	1.0	ND
<i>cis</i> -1,3-Dichloropropene	1.0	ND
Cyclohexane	1.0	ND
Dibromochloromethane	1.0	ND
Ethylbenzene	1.0	ND
Isopropylbenzene	1.0	ND J
<i>m,p</i> -Xylenes	2.0	ND
Methyl acetate	5.0	ND
Methyl <i>tert</i> -butyl ether	1.0	ND
Methylcyclohexane	1.0	ND
Methylene chloride	1.0	ND
<i>o</i> -Xylene	1.0	ND
Styrene	1.0	ND J
Tetrachloroethene	2.0	ND
Toluene	1.0	ND
<i>trans</i> -1,2-Dichloroethene	1.0	ND
<i>trans</i> -1,3-Dichloropropene	1.0	ND
Trichloroethene	1.0	ND

Comments: ng = nanograms. ND = Not Detected

Data File: 022811-16.D

Signature: \_\_\_\_\_

Jack D. Fox PhD, Technical Director

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Report To: Dave Myers  
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phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 120011

Lab Sample Number: 1419

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Lab Method Blank #1 (Before Samples)

Lab Project Number: 201108


Dilution Factor: 1

(ng)

(ng)

Analyte	Reporting Limit	Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,1,2,2-Tetrachloroethane	1.0	ND
1,1,2-Trichloroethane	1.0	ND
1,1,2-Trichlorotrifluoroethane	1.0	ND
1,1-Dichloroethane	1.0	ND
1,1-Dichloroethene	1.0	ND
1,2,4-Trichlorobenzene	1.0	ND
1,2-Dibromo-3-chloropropane	1.0	ND
1,2-Dibromoethane	1.0	ND
1,2-Dichlorobenzene	1.0	ND
1,2-Dichloroethane	1.0	ND
1,2-Dichloropropane	1.0	ND
1,3-Dichlorobenzene	1.0	ND
1,4-Dichlorobenzene	1.0	ND
Benzene	2.0	ND
Bromodichloromethane	1.0	ND
Bromoform	1.0	ND
Carbon disulfide	1.0	ND
Carbon tetrachloride	1.0	ND
Chlorobenzene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Signature: 

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 120011

Lab Sample Number: 1419

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Lab Method Blank #1 (Before Samples)

Lab Project Number: 201108

Dilution Factor: 1

(ng)

(ng)

Analyte	Reporting Limit	Mass on Tube
Chloroform	1.0	ND
cis -1,2-Dichloroethene	1.0	ND
cis -1,3-Dichloropropene	1.0	ND
Cyclohexane	1.0	ND
Dibromochloromethane	1.0	ND
Ethylbenzene	1.0	ND
Isopropylbenzene	1.0	ND
m,p -Xylenes	2.0	ND
Methyl acetate	5.0	ND
Methyl tert -butyl ether	1.0	ND
Methylcyclohexane	1.0	ND
Methylene chloride	1.0	ND
o -Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethene	2.0	ND
Toluene	1.0	ND
trans -1,2-Dichloroethene	1.0	ND
trans -1,3-Dichloropropene	1.0	ND
Trichloroethene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 022811-15.D

Signature:

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Volatiles and Semi-Volatiles Characterization

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NYSDOH ELAP ID Number: 11932  
 Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 140420

Lab Sample Number: 1420

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 2/28/11

Sample Type: Lab Method Blank #2 (After Samples)

Lab Project Number: 201108

Dilution Factor: 1

(ng)

(ng)

Analyte	Reporting Limit	Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,1,2,2-Tetrachloroethane	1.0	ND
1,1,2-Trichloroethane	1.0	ND
1,1,2-Trichlorotrifluoroethane	1.0	ND
1,1-Dichloroethane	1.0	ND
1,1-Dichloroethene	1.0	ND
1,2,4-Trichlorobenzene	1.0	ND
1,2-Dibromo-3-chloropropane	1.0	ND
1,2-Dibromoethane	1.0	ND
1,2-Dichlorobenzene	1.0	ND
1,2-Dichloroethane	1.0	ND
1,2-Dichloropropane	1.0	ND
1,3-Dichlorobenzene	1.0	ND
1,4-Dichlorobenzene	1.0	ND
Benzene	2.0	ND
Bromodichloromethane	1.0	ND
Bromoform	1.0	ND
Carbon disulfide	1.0	ND
Carbon tetrachloride	1.0	ND
Chlorobenzene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

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Volatiles and Semi-Volatiles Characterization

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25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: USEPA TO-17

### Laboratory Blank Report for Air

Field ID Number: 140420

Lab Sample Number: 1420

Field Location: NA

Date Sampled: NA

Client Project Number: 0116255.2A

Date Received: 2/11/11

Client Job Site: ANG DGI - Ramtech VI

Date Analyzed: 3/17/11

Sample Type: Lab Method Blank #2 (After Samples)

Lab Project Number: 201108

Dilution Factor: 1


(ng)

(ng)

Analyte	Reporting Limit	Mass on Tube
Chloroform	1.0	ND
cis -1,2-Dichloroethene	1.0	ND
cis -1,3-Dichloropropene	1.0	ND
Cyclohexane	1.0	ND
Dibromochloromethane	1.0	ND
Ethylbenzene	1.0	ND
Isopropylbenzene	1.0	ND
m,p -Xylenes	2.0	ND
Methyl acetate	5.0	ND
Methyl tert -butyl ether	1.0	ND
Methylcyclohexane	1.0	ND
Methylene chloride	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethene	2.0	ND
Toluene	1.0	1.1
trans -1,2-Dichloroethene	1.0	ND
trans -1,3-Dichloropropene	1.0	ND
Trichloroethene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 031711-9.D

Signature: 

Jack D. Fox PhD, Technical Director

Note: This report is part of a multipart document, and should only be evaluated in its entirety.

Please refer to the included chain of custody for additional sample information.





Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

25-Mar-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Analysis Report for Air

Field ID Number: GO122008  
Field Location: Indoor Air  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1421  
Dates Sampled: 1/10-2/8/11  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

Analyte	( $\mu\text{g}\cdot\text{m}^{-3}$ ) Reporting Limit	( $\mu\text{g}\cdot\text{m}^{-3}$ ) Result
1,1,1-Trichloroethane	0.06	NASD J
1,2-Dichloroethane	0.05	NASD
Benzene	0.04	NASD B
Chloroform	0.05	NASD
Cyclohexane	0.05	NASD
Ethylbenzene	0.05	NASD
Isopropylbenzene	0.05	NASD
m,p-Xylenes	0.04	NASD
Methyl acetate	0.05	NASD J
Methylcyclohexane	0.05	NASD
o-Xylene	0.05	NASD
Styrene	0.05	NASD J
Tetrachloroethylene	0.05	NASD
Toluene	0.05	NASD
Trichloroethylene	0.05	NASD

Comments:  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter. ND = Not Detected.

NASD = No Analyte Signals Detected; tube contamination or anomaly indicated.

Data File: 022111-15.D, 022211-4.D

Signature: 

Jack D. Fox PhD, Technical Director

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25-Mar-2011

Client: ERM, Inc.  
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5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Tentatively Identified Compounds in Air

Field ID Number: GO122008  
Field Location: Indoor Air  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Long-Term Passive Indoor Air

Lab Sample Number: 1421  
Dates Sampled: 1/10-2/8/11  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

<u>Compound</u>	(ng) <u>Mass on Tube</u>	( $\mu\text{g}\cdot\text{m}^{-3}$ ) <u>Estimated Concentration</u>
-----------------	-----------------------------	---

NASD = No Analyte Signals Detected; tube contamination or anomaly indicated.

Comments: ng = nanograms.

Data File: 022111-15.D, 022211-4.D

Signature: 

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phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Field Blank Report for Air

Field ID Number: GO122028  
Field Location: Passive Blank  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Field Blank for Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1422  
Date Sampled: 1/10/11  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND J
1,2-Dichloroethane	1.0	ND
Benzene	2.0	2.9 B
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND J
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND J
Tetrachloroethylene	1.0	ND
Toluene	2.0	ND
Trichloroethylene	1.0	ND

Comments: ng = nanograms. ND = Not Detected.

Data File: 022111-14.D

Signature:   
Jack D. Fox PhD, Technical Director

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25-Mar-2011

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5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO122005  
Field Location: NA  
Client Project Number: 0116255.2A  
Client Job Site: ANG DGI - Ramtech VI  
Sample Type: Lab Method Blank #1 (Before Samples)  
Dilution Factor: 1

Lab Sample Number: 1423  
Date Sampled: NA  
Date Received: 2/11/11  
Date Analyzed: 2/21/11  
Lab Project Number: 201108

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	2.0	2.5
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethylene	1.0	ND
Toluene	2.0	ND
Trichloroethylene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 022111-13.D

Signature:   
Jack D. Fox PhD, Technical Director

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25-Mar-2011

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Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO122047

Field Location: NA

Client Project Number: 0116255.2A

Client Job Site: ANG DGI - Ramtech VI

Sample Type: Lab Method Blank #2 (After Samples)

Dilution Factor: 1

Lab Sample Number: 1424

Date Sampled: NA

Date Received: 2/11/11

Date Analyzed: 2/21/11

Lab Project Number: 201108

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	2.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	1.0	ND
Tetrachloroethylene	1.0	ND
Toluene	2.0	ND
Trichloroethylene	1.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

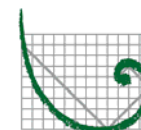
Data File: 022111-17.D

Signature: 

Jack D. Fox PhD, Technical Director

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ERM

**DATA USABILITY SUMMARY REPORT (DUSR)  
ANG HANCOCK FIELD - SITE 15  
SYRACUSE, NEW YORK  
AIR SAMPLE ANALYSES  
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)  
PROJECT NUMBER 0116255  
VAPOR TRAIL ANALYTICS, LLC (VTA)  
SAMPLE DELIVERY GROUP (SDG) NUMBER 201112**

***Deliverables:***

The above referenced data package for two (2) air samples, one (1) field blank sample, and two (2) method blank samples contains all the required deliverables as stipulated under the 2005 New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B deliverables. The samples were analyzed for volatile organics following United States Environmental Protection Agency (USEPA) Method TO-17. The data have been evaluated according to the protocols and quality control (QC) requirements of the ASP, the National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region 2 Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Volatile Organic Analysis of Ambient Air in canister by Method TO-15, and the reviewer's professional judgment.

This report pertains to the following air samples collected from 7 February 2011 through 8 March 2011:

*Samples*

GO125843 Long-Term Passive Indoor Air  
GO124449 Long-Term Passive Indoor Air

*QC Samples*

GO157992 Field Blank for Passive Indoor Air  
GO158987 Lab Method Blank #1 (Before Samples)  
GO158930 Lab Method Blank #2 (After Samples)

The following items/criteria were reviewed:

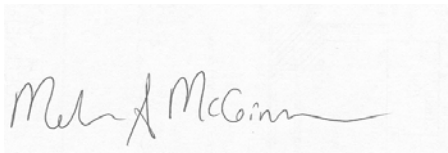
- Case narrative and deliverable compliance
- Chain-of-Custody (COC)
- Holding times
- Sorbent tube cleaning summary and data
- Surrogate compound recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- Report of Analysis data sheets (Form I)
- GC/MS chromatograms, mass spectra and quantitation reports
- Quantitation/reporting limits
- Qualitative and quantitative compound identification

The items listed above were in compliance with the analytical methods and with the ASP and USEPA criteria with the exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

- No qualification of the sample data is required.

***Package Summary:***

All data are valid and usable with qualifications as noted in this review.



Signed:

\_\_\_\_\_  
Melissa A. McGinnis  
Project Scientist

Dated: 15 June 2011



Volatiles and Semi-Volatiles Characterization

179 Lake Avenue  
Rochester, NY 14608 USA  
Tel: (585) 727-2825  
www.vaportrailanalytics.com

7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Analysis Report for Air

Field ID Number: GO125843  
Field Location: Passive Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1450  
Dates Sampled: 2/7-3/8/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	( $\mu\text{g}\cdot\text{m}^{-3}$ ) Reporting Limit	( $\mu\text{g}\cdot\text{m}^{-3}$ ) Result
1,1,1-Trichloroethane	0.06	1.55
1,2-Dichloroethane	0.05	0.10
Benzene	0.22	1.04
Chloroform	0.05	0.17
Cyclohexane	0.05	1.47
Ethylbenzene	0.11	0.55
Isopropylbenzene	0.05	0.11
m,p-Xylenes	0.08	1.10
Methyl acetate	0.05	0.22
Methylcyclohexane	0.05	1.64
o-Xylene	0.05	0.79
Styrene	0.24	ND
Tetrachloroethylene	0.05	0.27
Toluene	0.05	3.10
Trichloroethylene	0.10	0.31

Comments:  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter. ND = Not Detected.

Data File: 032311-18.D

Signature: Jack D. Fox  
Jack D. Fox PhD, Technical Director

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Volatiles and Semi-Volatiles Characterization

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7-Apr-2011

Client: ERM, Inc.  
Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: **Modified USEPA TO-17**

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Analysis Report for Air

Field ID Number: GO124449  
Field Location: Duplicate Passive Indoor Air  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Long-Term Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1451  
Dates Sampled: 2/7-3/8/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	Reporting Limit ( $\mu\text{g}\cdot\text{m}^{-3}$ )	Result ( $\mu\text{g}\cdot\text{m}^{-3}$ )
1,1,1-Trichloroethane	0.06	1.42
1,2-Dichloroethane	0.05	0.09
Benzene	0.22	1.02
Chloroform	0.05	0.17
Cyclohexane	0.05	1.36
Ethylbenzene	0.11	0.50
Isopropylbenzene	0.05	0.10
m,p-Xylenes	0.08	0.95
Methyl acetate	0.05	0.17
Methylcyclohexane	0.05	1.39
o-Xylene	0.05	0.68
Styrene	0.24	ND
Tetrachloroethylene	0.05	0.25
Toluene	0.05	2.56
Trichloroethylene	0.10	0.27

Comments:  $\mu\text{g}\cdot\text{m}^{-3}$  = micrograms per cubic meter. ND = Not Detected.

Data File: 032311-19.D

Signature:   
Jack D. Fox PhD, Technical Director

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7-Apr-2011

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Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Field Blank Report for Air

Field ID Number: GO157992  
Field Location: Passive Blank  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Field Blank for Passive Indoor Air  
Dilution Factor: 1

Lab Sample Number: 1449  
Date Sampled: 2/7/11  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	5.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	5.0	ND
Tetrachloroethylene	1.0	ND
Toluene	1.0	ND
Trichloroethylene	2.0	ND

Comments: ng = nanograms. ND = Not Detected.

Data File: 032311-17.D

Signature: Jack D. Fox  
Jack D. Fox PhD, Technical Director

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7-Apr-2011

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Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO158987  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Lab Method Blank #1 (Before Samples)  
Dilution Factor: 1

Lab Sample Number: 1452  
Date Sampled: NA  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	5.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	5.0	ND
Tetrachloroethylene	1.0	ND
Toluene	1.0	ND
Trichloroethylene	2.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 032311-16.D

Signature:   
Jack D. Fox PhD, Technical Director

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7-Apr-2011

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Report To: Dave Myers  
5788 Widewaters Parkway  
Dewitt, New York 13214  
phone 315.445.2554

NYSDOH ELAP ID Number: 11932  
Analytical Method: Modified USEPA TO-17

Sampling Method: ASTM D6196-03 (Axial Diffusive)

### Laboratory Blank Report for Air

Field ID Number: GO158930  
Field Location: NA  
Client Project Number: Not Indicated  
Client Job Site: ANG Hancock - Ramtech Engineering  
Sample Type: Lab Method Blank #2 (After Samples)  
Dilution Factor: 1

Lab Sample Number: 1453  
Date Sampled: NA  
Date Received: 3/14/11  
Date Analyzed: 3/23/11  
Lab Project Number: 201112

Analyte	(ng) Reporting Limit	(ng) Mass on Tube
1,1,1-Trichloroethane	1.0	ND
1,2-Dichloroethane	1.0	ND
Benzene	5.0	ND
Chloroform	1.0	ND
Cyclohexane	1.0	ND
Ethylbenzene	2.0	ND
Isopropylbenzene	1.0	ND
m,p-Xylenes	2.0	ND
Methyl acetate	1.0	ND
Methylcyclohexane	1.0	ND
o-Xylene	1.0	ND
Styrene	5.0	ND
Tetrachloroethylene	1.0	ND
Toluene	1.0	ND
Trichloroethylene	2.0	ND

Comments: ng = nanograms. ND = Not Detected. NA = Not Applicable.

Data File: 032311-20.D

Signature: Jack D. Fox  
Jack D. Fox PhD, Technical Director

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