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June 1, 2011

Mr. Eugene Melnyk, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Subject: **Vapor Intrusion Investigation Report**
Former Buffalo Color Corporation Site – Areas ABCE
Armor Electric Building - 343 Elk Street (Area E)
Buffalo, New York
Order on Consent and Administrative Settlement #B9-0802-09-02
Mactec Project No. 3410090701

Dear Mr. Melnyk,

Mactec Engineering and Consulting, Inc. (Mactec) has prepared this Vapor Intrusion Investigation Report (VI Report) on behalf of our client, South Buffalo Development LLC (SBD), to document the completion of vapor intrusion sampling at the Armor Electric building (343 Elk Street/former Building 322) in Area E of the Former Buffalo Color Corporation (BCC) Site. The work was performed pursuant to the referenced Consent Order between the New York State Department of Environmental Conservation (NYSDEC) and Honeywell International, Inc. (Honeywell).

SITE DESCRIPTION & BACKGROUND

The former BCC Site is located on the south side of the City of Buffalo, Erie County, New York, in an area of heavy industrial development that dates to the mid-1800s. The former BCC Site consists of four distinct areas (Areas A, B, C, and E).

Area E is bounded by Lee Street and Area C to the east with Elk Street to the north. The warehouse building at 343 Elk Street (former BCC Building 322) is located on the northwest corner of Area E and is currently operated by Armor Electric as an industrial electric motor repair/refurbishment business. The building is a single story steel structure with approximately 20 foot tall ceilings and no basement. The partitioned layout of the current business operations include an office area, machining shop, and main warehouse area containing framed-out offices, work area, and storage area.

Mactec Engineering and Consulting, Inc.
800 North Bell Avenue, Suite 200 • Pittsburgh, PA 15106 • Phone: 412-279-6661 • Fax: 412-279-8567
www.mactec.com

In 2009, Honeywell and NYSDEC executed a Consent Order that required the completion of VI studies for several structures that will remain on the former BCC Site, including the 343 Elk Street warehouse building (Armor Electric building). In February 2009, Mactec issued a Scope of Work document for the VI sampling effort which was submitted to and accepted by NYSDEC.

This letter report has been prepared to document the completion of VI sampling activities completed in January 2011 for the 343 Elk Street - Armor Electric building on Area E.

SCOPE OF WORK

The VI investigation was completed for the 343 Elk Street warehouse building in accordance with the February 2009 Scope of Work document and subsequent Pre-Design Investigation (PDI) Work Plan (Mactec, August 2009). The procedures used for sample collection and analyses are described below.

- Two sub-slab soil vapor samples, two indoor air samples, and one outdoor (ambient) air sample were collected at the 343 Elk Street building. The sample locations are shown on Figure 1. The VI samples were collected via the following procedure:

    1. Indoor Air Quality Questionnaire and Building Inventory Form: A chemical inventory and site information were unavailable for the Armor Electric (343 Elk Street) building at the time of the investigation; therefore, an Indoor Air Quality Questionnaire and Building Inventory Form was not completed for that building.

    2. A hole was drilled through the floor slab at each of the chosen sub-slab locations and a section of ¼-inch Teflon tubing was inserted into the hole, making sure that the tubing did not touch the bottom of the hole. The annular space around the tubing was sealed to the concrete floor with modeling clay to approximately ½ inch below the surface, and bees wax was poured into the remaining void of the hole to seal it to grade. One tubing volume was purged with a 60 cc syringe prior to connecting a SUMMA canister to the tubing for collection of the sub slab air samples. Note: The two sub-slab sample locations at the 343 Elk Street building were based upon locations approved by the owner during a previous VI sampling event completed by others in 2007.

    3. SUMMA canisters were set up directly next to each of the sub-slab SUMMA canister locations. An outdoor ambient air SUMMA canister was set in an open area along the south side of the 343 Elk Street building.

    4. Once all SUMMA canisters were set up, the valves on all canisters were opened at roughly the same time. The valves were left open for the 8-hour sample collection time.

    5. Mactec personnel checked the sample flow valves periodically during the 8-hour time frame to ensure that proper vacuum existed over the duration of the sample collection interval.

6. After the 8-hour sampling period had elapsed, Mactec retrieved the canisters and sealed the holes in the floor with a fast drying concrete patch (i.e. Quickcrete™);

- The SUMMA canister samples were labeled and hand-delivered with chain-of-custody documents to TestAmerica's Amherst NY laboratory. TestAmerica shipped the samples to the TestAmerica laboratory in Burlington, VT (a NYSDOH ELAP certified laboratory), where they were analyzed for volatile organic compounds (VOCs) by USEPA TO-15 analysis.

- Mactec evaluated and validated the laboratory data consistent with NY guidance and policy.

The results of the investigation are provided below.

RESULTS

Upon receipt of the laboratory analysis results, a data validation summary report (DVSR) was completed by a Mactec Project Chemist. Based on the outcome of the data review and validation process, the data was deemed usable as presented in this report. The DVSR is included as Attachment B. The validated analytical results are summarized in Table 3 of the DVSR. A complete copy of the laboratory report is provided as Attachment C.

As shown in Table 3 of the DVSR (Appendix B), various VOCs were detected in the two sub-slab vapor samples (AE-SS-1 and AE-SS-2), two indoor air samples (AE-IA-1 and AE-IA-2), and one ambient air sample (AE-OA-1) at the Armor Electric building (343 Elk Street). Mactec has evaluated the results in accordance with the latest version of the New York State Department of Health (NYSDOH) document "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (October 2006). Based on this evaluation, the following conclusions are presented:

- The analytical results for the Armor Electric building indoor air samples (samples AE-IA-1 and AE-IA-2) identified the presence of trichloroethene (TCE) at concentrations of 19,000 $\mu g/m^3$ and 15,000 $\mu g/m^3$, respectively. By comparison, the reported TCE concentrations for the two sub-slab vapor samples (samples AE-SS-1 and AE-SS-2) were 2,100 µg/m3 and 2,200 µg/m3, respectively. These results are consistent with results obtained during the 2007 VI study completed for the building by another consultant. Several other VOCs (ethylbenzene, toluene, and xylene) were also identified at an inverse ratio between the indoor air and sub-slab vapor concentrations, although at significantly lower levels than the TCE concentrations. The results suggest that, while TCE (and to a lesser extent other VOCs) may be present in the subsurface, it is

likely that sources exist inside the building. Only the TCE results exceeded the NYSDOH action levels presented in Soil Vapor/Indoor Air Matrix 1 of the NYSDOH soil vapor intrusion guidance document. The matrix specifies that mitigation is required for the detected TCE sub-slab vapor and indoor air concentrations. Honeywell has initiated discussions with Armor Electric regarding installation of a sub-slab ventilation system. Any action needed to control sources of TCE within the building is the responsibility of Armor Electric. Additional information will be provided regarding the proposed sub-slab vapor mitigation method and implementation schedule in a separate submittal.

CONCLUSIONS

Based on these findings, VI mitigation in the form of a sub-slab ventilation system will be pursued under an agreement between Honeywell and Armor Electric.

We trust that this report satisfies the requirements of NYSDEC. Please contact Mr. Richard Galloway of Honeywell at (973) 455-4640 or Mr. John Scrabis of Mactec at (412) 279-6661 should you have any questions or require additional information.

Sincerely,

Mactec Engineering and Consulting, Inc.

Jason Trentini
Project Scientist

John M. Scrabis
Sr. Principal Engineer

JT/JMS:anw

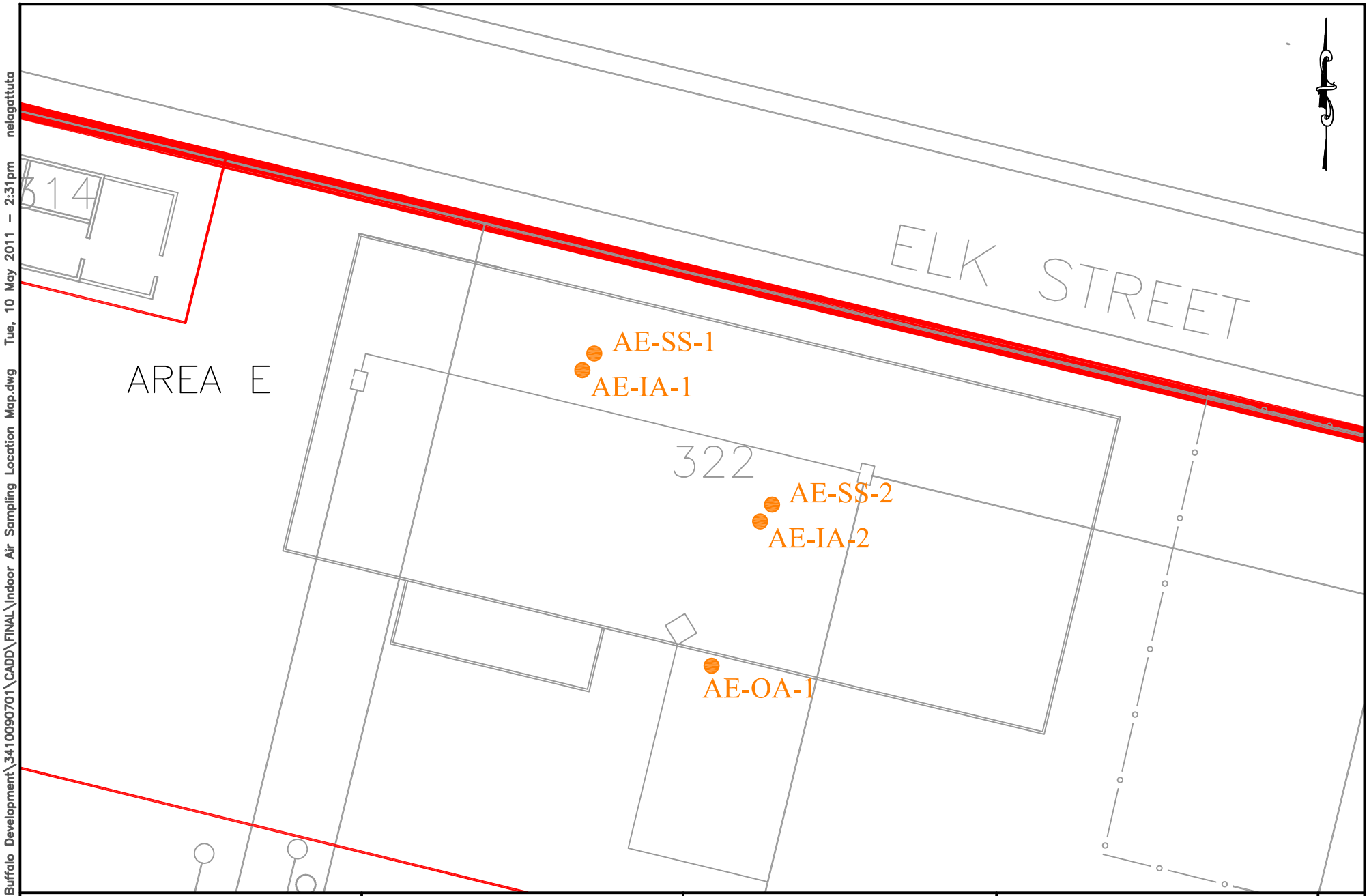
w/atts

cc: R. Galloway (Honeywell)
T. Perkins (Honeywell)
T. Pawlak (Armor Electric)

P:\PROJECTS\South Buffalo Development\3410090701\FINAL DELIVERABLES\VI Sampling - Hospital Bldg & Armor Electric (Jan 2011)\Armor Electric BLDG 322_Draft Buffalo Color - JAN2011 VI Report.docx

FIGURE

DRAWN BY: NEL 2-28-2011 APPROVED BY: JAT



P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Indoor Air Sampling Location Map.dwg Tue, 10 May 2011 - 2:31pm nelagattuta

40 0 40
SCALE: 1"= 40'

SOUTH BUFFALO DEVELOPMENT
BUFFALO, NEW YORK

Project No.: 3410090701

MACTEC
Engineering & Consulting Inc.
800 North Bell Avenue, Suite 200
Pittsburgh, PA 15106

Vapor Intrusion Sample Locations
Building 322
343 Elk Street

Figure: 1

1

ATTACHMENT A

DATA VALIDATION SUMMARY REPORT

DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING - ARMOR ELECTRIC BLDG. 322
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

1.0 INTRODUCTION

Sub-slab vapor and indoor air samples were collected at the Buffalo Color site on January 26, 2011. Samples were analyzed by TestAmerica in South Burlington, Vermont. A listing of samples included in this investigation is presented in Table 1. Samples were analyzed using the following methods:

- Volatile Organic Compounds (VOCs) in Ambient Air by EPA Method TO-15
- VOCs in Ambient Air, Low Concentration by EPA Method TO-15 LL

Sample AE-OA-1 was analyzed by the low concentration method to obtain lower detection limits.

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

A data quality validation was completed by the project chemist using NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2002). Quality control (QC) limits for the TO-15 analysis specified in the USEPA Region II guidelines (USEPA, 2006) were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), internal standard performance, data transcription, electronic data reporting, sample calculations, and data qualification.

A summary of data qualification actions is presented on Table 2. Final sample results are presented on Table 3. The following qualifiers are used in the final data presentation.

U = target analyte is not detected at the reporting limit
J = concentration is estimated
UJ = target analyte is not detected at the reporting limit and is estimated

With the exception of the items discussed below, results are interpreted to be usable as reported by the laboratory.

2.0 VOLATILE ORGANIC COMPOUNDS

Continuing Calibration

The continuing calibration associated with a subset of samples had percent differences outside the QC limit of 30 percent for vinyl chloride (49), 1,3-butadiene (34), and methylene chloride (50). Vinyl chloride, 1,3-butadiene, and methylene chloride were not detected in associated sample AE-OA-1 and reporting limits were qualified as estimated (UJ).

Laboratory Control Sample

The LCS associated with a subset of samples had a percent recovery greater than upper QC limit of 130 percent for n-hexane (131), which may indicate a high bias. Detections of n-hexane in associated sample AE-OA-1 were qualified as estimated (J).

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2002. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; Draft DER-10; Division of Environmental Remediation; December 2002.

U.S. Environmental Protection Agency (USEPA), 2006. "Validating Air Samples Volatile Organic Analysis of Ambient Air in Canister by Method TO-15"; USEPA Region II; HW-31; Revision #4; October 2006.

Project chemist: Bradley B. LaForest, NRCC-EAC

Date: March 15, 2011

Reviewed by: Chris Ricardi, NRCC-EAC

Date: March 16, 2011

TABLE 1
SAMPLE SUMMARY
DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

SDG	Field Sample ID	Lab Sample ID	Sample Purpose	Date Sampled	Method
200-3569	AE-IA-1	200-3569-1	REG	1/26/2011	TO-15
200-3569	AE-SS-1	200-3569-2	REG	1/26/2011	TO-15
200-3569	AE-IA-2	200-3569-3	REG	1/26/2011	TO-15
200-3569	AE-SS-2	200-3569-4	REG	1/26/2011	TO-15
200-3569	AE-OA-1	200-3569-5	REG	1/26/2011	TO-15

TABLE 2 - SUMMARY OF VALIDAITON ACTIONS
DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

Field Sample ID	Lab Sample ID	Sample Purpose	Parameter Name	Lab Result	Lab Units	Lab Qualifier	Validation Qualifier	Reason Codes
AE-OA-1	200-3569-5	REG	1,3-Butadiene	0.18	ug/m3	U *	UJ	CCV
AE-OA-1	200-3569-5	REG	Methylene Chloride	2.8	ug/m3	U ^ *	UJ	CCV
AE-OA-1	200-3569-5	REG	n-Hexane	0.86	ug/m3	*	J	LCSH
AE-OA-1	200-3569-5	REG	Vinyl chloride	0.2	ug/m3	U *	UJ	CCV

Notes:
U = not detected
J = estimated
CCV = continuing calibration outside limit
LCSH = high recovery in lab control sample

prepared by CSR
reviewed by BBL
3/16/11

TABLE 3 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

		Field Sample ID	AE-IA-1	AE-IA-2	AE-OA-1	AE-SS-1
		Location	QC	QC	QC	QC
		Sample Date	1/27/2011	1/27/2011	1/27/2011	1/27/2011
Units	Method	Parameter Name				
ug/m3	TO15	1,1,1-Trichloroethane	120 U	110 U	0.22 U	18 U
ug/m3	TO15	1,1,2,2-Tetrachloroethane	150 U	140 U	0.27 U	23 U
ug/m3	TO15	1,1,2-Trichloroethane	120 U	110 U	0.22 U	18 U
ug/m3	TO15	1,1-Dichloroethane	90 U	81 U	0.16 U	14 U
ug/m3	TO15	1,1-Dichloroethene	88 U	79 U	0.16 U	13 U
ug/m3	TO15	1,2-Dibromoethane	170 U	150 U	0.31 U	26 U
ug/m3	TO15	1,2-Dichloroethane	90 U	81 U	0.32 U	14 U
ug/m3	TO15	1,2-Dichloroethene, Total	88 U	79 U	0.16 U	13 U
ug/m3	TO15	1,2-Dichloropropane	100 U	92 U	0.37 U	15 U
ug/m3	TO15	1,2-Dichlorotetrafluoroethane	160 U	140 U	0.28 U	23 U
ug/m3	TO15	1,3,5-Trimethylbenzene	110 U	98 U	0.39 U	21
ug/m3	TO15	1,3-Butadiene	49 U	44 U	0.18 UJ	7.4 U
ug/m3	TO15	2,2,4-Trimethylpentane	100 U	93 U	0.42	16 U
ug/m3	TO15	3-Chloropropene	170 U	160 U	0.25 U	26 U
ug/m3	TO15	4-Ethyltoluene	110 U	98 U	0.2 U	16 U
ug/m3	TO15	Benzene	71 U	64 U	0.85	31
ug/m3	TO15	Bromodichloromethane	150 U	130 U	0.27 U	22 U
ug/m3	TO15	Bromoethene(Vinyl Bromide)	97 U	87 U	0.35 U	15 U
ug/m3	TO15	Bromoform	230 U	210 U	0.41 U	35 U
ug/m3	TO15	Bromomethane	86 U	78 U	0.31 U	13 U
ug/m3	TO15	Carbon tetrachloride	140 U	130 U		21 U
ug/m3	TO15	Chloroethane	150 U	130 U	0.21 U	22 U
ug/m3	TO15	Chloroform	110 U	98 U	0.2 U	16 U
ug/m3	TO15	cis-1,2-Dichloroethene	88 U	79 U	0.16 U	13 U
ug/m3	TO15	cis-1,3-Dichloropropene	100 U	91 U	0.18 U	15 U
ug/m3	TO15	Cyclohexane	76 U	69 U	0.19	170
ug/m3	TO15	Dibromochloromethane	190 U	170 U	0.34 U	28 U
ug/m3	TO15	Dichlorodifluoromethane	270 U	250 U	2.3	41 U
ug/m3	TO15	Ethylbenzene	790	590	0.58	57
ug/m3	TO15	m,p-Xylene	2100	1600		190
ug/m3	TO15	m-Xylene & p-Xylene			1.7	
ug/m3	TO15	Methyl tert-butyl ether	80 U	72 U	0.14 U	12 U
ug/m3	TO15	Methylene Chloride	190 U	170 U	2.8 UJ	29 U
ug/m3	TO15	n-Heptane	91 U	82 U	0.43	170

prepared by WCG
reviewed by CSR
3/16/11

TABLE 3 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

		Field Sample ID	AE-IA-1	AE-IA-2	AE-OA-1	AE-SS-1
		Location	QC	QC	QC	QC
		Sample Date	1/27/2011	1/27/2011	1/27/2011	1/27/2011
Units	Method	Parameter Name				
ug/m3	TO15	n-Hexane	78 U	70 U	0.86 J	130
ug/m3	TO15	o-Xylene			0.5	
ug/m3	TO15	Tetrachloroethene	150 U	140 U	0.27 U	23 U
ug/m3	TO15	Toluene	300	220	1.7	130
ug/m3	TO15	trans-1,2-Dichloroethene	88 U	79 U	0.16 U	13 U
ug/m3	TO15	trans-1,3-Dichloropropene	100 U	91 U	0.18 U	15 U
ug/m3	TO15	Trichloroethene	19000	15000	17	2100
ug/m3	TO15	Trichlorofluoromethane	120 U	110 U	1.4	19 U
ug/m3	TO15	Vinyl chloride	57 U	51 U	0.2 UJ	8.5 U
ug/m3	TO15	Xylene (total)	2600	2000		240
ug/m3	TO15	Xylene, o-	460	340		56
ug/m3	TO15	Xylenes, Total			2.2	

Notes:
U = undetected
J = estimated value

TABLE 3 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

		Field Sample ID	AE-SS-2
		Location	QC
		Sample Date	1/27/2011
Units	Method	Parameter Name	
ug/m3	TO15	1,1,1-Trichloroethane	22 U
ug/m3	TO15	1,1,2,2-Tetrachloroethane	27 U
ug/m3	TO15	1,1,2-Trichloroethane	22 U
ug/m3	TO15	1,1-Dichloroethane	16 U
ug/m3	TO15	1,1-Dichloroethene	16 U
ug/m3	TO15	1,2-Dibromoethane	31 U
ug/m3	TO15	1,2-Dichloroethane	16 U
ug/m3	TO15	1,2-Dichloroethene, Total	16 U
ug/m3	TO15	1,2-Dichloropropane	18 U
ug/m3	TO15	1,2-Dichlorotetrafluoroethane	28 U
ug/m3	TO15	1,3,5-Trimethylbenzene	20 U
ug/m3	TO15	1,3-Butadiene	8.8 U
ug/m3	TO15	2,2,4-Trimethylpentane	19 U
ug/m3	TO15	3-Chloropropene	31 U
ug/m3	TO15	4-Ethyltoluene	20 U
ug/m3	TO15	Benzene	13 U
ug/m3	TO15	Bromodichloromethane	27 U
ug/m3	TO15	Bromoethene(Vinyl Bromide)	17 U
ug/m3	TO15	Bromoform	41 U
ug/m3	TO15	Bromomethane	16 U
ug/m3	TO15	Carbon tetrachloride	25 U
ug/m3	TO15	Chloroethane	26 U
ug/m3	TO15	Chloroform	20 U
ug/m3	TO15	cis-1,2-Dichloroethene	16 U
ug/m3	TO15	cis-1,3-Dichloropropene	18 U
ug/m3	TO15	Cyclohexane	34
ug/m3	TO15	Dibromochloromethane	34 U
ug/m3	TO15	Dichlorodifluoromethane	49 U
ug/m3	TO15	Ethylbenzene	64
ug/m3	TO15	m,p-Xylene	160
ug/m3	TO15	m-Xylene & p-Xylene	
ug/m3	TO15	Methyl tert-butyl ether	14 U
ug/m3	TO15	Methylene Chloride	35 U
ug/m3	TO15	n-Heptane	41

prepared by WCG
reviewed by CSR
3/16/11

TABLE 3 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JANUARY 2011 AIR SAMPLING
HONEYWELL – BUFFALO COLOR
BUFFALO, NEW YORK

		Field Sample ID	**AE-SS-2**	
		Location	**QC**	
		Sample Date	**1/27/2011**	
Units	**Method**	**Parameter Name**		
ug/m3	TO15	n-Hexane	26	
ug/m3	TO15	o-Xylene		
ug/m3	TO15	Tetrachloroethene	27	U
ug/m3	TO15	Toluene	34	
ug/m3	TO15	trans-1,2-Dichloroethene	16	U
ug/m3	TO15	trans-1,3-Dichloropropene	18	U
ug/m3	TO15	Trichloroethene	2200	
ug/m3	TO15	Trichlorofluoromethane	22	U
ug/m3	TO15	Vinyl chloride	10	U
ug/m3	TO15	Xylene (total)	190	
ug/m3	TO15	Xylene, o-	33	
ug/m3	TO15	Xylenes, Total		

Notes:
U = undetected
J = estimated value

ATTACHMENT B

LABORATORY REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 200-3569-1

SDG Number: 200-3569

Job Description: Buffalo Color

For:
MACTEC Engineering and Consulting Inc
700 North Bell Avenue, Suite 200
Carnegie, PA 15106

Attention: John Scrabis

Approved for release.
Don C Dawicki
Project Manager II
2/14/2011 3:53 PM

Don C Dawicki
Project Manager II
don.dawicki@testamericainc.com
02/14/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

EXECUTIVE SUMMARY - Detections

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
200-3569-1	**AE-IA-1**				
Trichloroethene		3500	22	ppb v/v	TO-15
Trichloroethene		19000	120	ug/m3	TO-15
Toluene		79	22	ppb v/v	TO-15
Toluene		300	84	ug/m3	TO-15
Ethylbenzene		180	22	ppb v/v	TO-15
Ethylbenzene		790	96	ug/m3	TO-15
m,p-Xylene		490	56	ppb v/v	TO-15
m,p-Xylene		2100	240	ug/m3	TO-15
Xylene, o-		110	22	ppb v/v	TO-15
Xylene, o-		460	96	ug/m3	TO-15
Xylene (total)		600	22	ppb v/v	TO-15
Xylene (total)		2600	96	ug/m3	TO-15
200-3569-2	**AE-SS-1**				
n-Hexane		36	3.3	ppb v/v	TO-15
n-Hexane		130	12	ug/m3	TO-15
Cyclohexane		51	3.3	ppb v/v	TO-15
Cyclohexane		170	11	ug/m3	TO-15
Benzene		9.9	3.3	ppb v/v	TO-15
Benzene		31	11	ug/m3	TO-15
n-Heptane		41	3.3	ppb v/v	TO-15
n-Heptane		170	14	ug/m3	TO-15
Trichloroethene		390	3.3	ppb v/v	TO-15
Trichloroethene		2100	18	ug/m3	TO-15
Toluene		33	3.3	ppb v/v	TO-15
Toluene		130	13	ug/m3	TO-15
Ethylbenzene		13	3.3	ppb v/v	TO-15
Ethylbenzene		57	15	ug/m3	TO-15
m,p-Xylene		43	8.4	ppb v/v	TO-15
m,p-Xylene		190	36	ug/m3	TO-15
Xylene, o-		13	3.3	ppb v/v	TO-15
Xylene, o-		56	15	ug/m3	TO-15
Xylene (total)		56	3.3	ppb v/v	TO-15
Xylene (total)		240	15	ug/m3	TO-15
1,3,5-Trimethylbenzene		4.4	3.3	ppb v/v	TO-15
1,3,5-Trimethylbenzene		21	16	ug/m3	TO-15

EXECUTIVE SUMMARY - Detections

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
200-3569-3	**AE-IA-2**				
Trichloroethene		2700	20	ppb v/v	TO-15
Trichloroethene		15000	110	ug/m3	TO-15
Toluene		57	20	ppb v/v	TO-15
Toluene		220	75	ug/m3	TO-15
Ethylbenzene		140	20	ppb v/v	TO-15
Ethylbenzene		590	87	ug/m3	TO-15
m,p-Xylene		370	50	ppb v/v	TO-15
m,p-Xylene		1600	220	ug/m3	TO-15
Xylene, o-		79	20	ppb v/v	TO-15
Xylene, o-		340	87	ug/m3	TO-15
Xylene (total)		450	20	ppb v/v	TO-15
Xylene (total)		2000	87	ug/m3	TO-15
200-3569-4	**AE-SS-2**				
n-Hexane		7.4	4.0	ppb v/v	TO-15
n-Hexane		26	14	ug/m3	TO-15
Cyclohexane		9.9	4.0	ppb v/v	TO-15
Cyclohexane		34	14	ug/m3	TO-15
n-Heptane		9.9	4.0	ppb v/v	TO-15
n-Heptane		41	16	ug/m3	TO-15
Trichloroethene		410	4.0	ppb v/v	TO-15
Trichloroethene		2200	21	ug/m3	TO-15
Toluene		9.0	4.0	ppb v/v	TO-15
Toluene		34	15	ug/m3	TO-15
Ethylbenzene		15	4.0	ppb v/v	TO-15
Ethylbenzene		64	17	ug/m3	TO-15
m,p-Xylene		37	10	ppb v/v	TO-15
m,p-Xylene		160	43	ug/m3	TO-15
Xylene, o-		7.5	4.0	ppb v/v	TO-15
Xylene, o-		33	17	ug/m3	TO-15
Xylene (total)		44	4.0	ppb v/v	TO-15
Xylene (total)		190	17	ug/m3	TO-15

EXECUTIVE SUMMARY - Detections

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
200-3569-5	**AE-OA-1**					
Dichlorodifluoromethane		0.46		0.040	ppb v/v	TO15 LL
Dichlorodifluoromethane		2.3		0.20	ug/m3	TO15 LL
Trichlorofluoromethane		0.25		0.040	ppb v/v	TO15 LL
Trichlorofluoromethane		1.4		0.22	ug/m3	TO15 LL
n-Hexane		0.24	*	0.080	ppb v/v	TO15 LL
n-Hexane		0.86	*	0.28	ug/m3	TO15 LL
Cyclohexane		0.055		0.040	ppb v/v	TO15 LL
Cyclohexane		0.19		0.14	ug/m3	TO15 LL
Carbon tetrachloride		0.063		0.040	ppb v/v	TO15 LL
Carbon tetrachloride		0.40		0.25	ug/m3	TO15 LL
2,2,4-Trimethylpentane		0.089		0.040	ppb v/v	TO15 LL
2,2,4-Trimethylpentane		0.42		0.19	ug/m3	TO15 LL
Benzene		0.27		0.040	ppb v/v	TO15 LL
Benzene		0.85		0.13	ug/m3	TO15 LL
n-Heptane		0.10		0.040	ppb v/v	TO15 LL
n-Heptane		0.43		0.16	ug/m3	TO15 LL
Trichloroethene		3.1		0.040	ppb v/v	TO15 LL
Trichloroethene		17		0.21	ug/m3	TO15 LL
Toluene		0.45		0.040	ppb v/v	TO15 LL
Toluene		1.7		0.15	ug/m3	TO15 LL
Ethylbenzene		0.13		0.040	ppb v/v	TO15 LL
Ethylbenzene		0.58		0.17	ug/m3	TO15 LL
o-Xylene		0.11		0.040	ppb v/v	TO15 LL
o-Xylene		0.50		0.17	ug/m3	TO15 LL
m-Xylene & p-Xylene		0.38		0.080	ppb v/v	TO15 LL
m-Xylene & p-Xylene		1.7		0.35	ug/m3	TO15 LL
Xylenes, Total		0.50		0.040	ppb v/v	TO15 LL
Xylenes, Total		2.2		0.17	ug/m3	TO15 LL

METHOD SUMMARY

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Description	Lab Location	Method	Preparation Method
Matrix: Air			
Volatile Organic Compounds in Ambient Air	TAL BUR	EPA TO-15	
Collection via Summa Canister	TAL BUR		Summa Canister
Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	TAL BUR	EPA TO15 LL	
Collection via Summa Canister	TAL BUR		Summa Canister

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Method	Analyst	Analyst ID
EPA TO-15	Valjevac, Sanel	SV
EPA TO15 LL	Desjardins, William R	WRD

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-IA-1**

Lab Sample ID: 200-3569-1
Client Matrix: Air

Date Sampled: 01/26/2011 1555
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-13365	Instrument ID: C.i
Preparation:	Summa Canister		Lab File ID: cjog021.d
Dilution:	111		Initial Weight/Volume: 29 mL
Date Analyzed:	02/08/2011 1401		Final Weight/Volume: 200 mL
Date Prepared:	02/08/2011 1401		Injection Volume: 200 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	56	U	56
1,2-Dichlorotetrafluoroethane	22	U	22
Vinyl chloride	22	U	22
1,3-Butadiene	22	U	22
Bromomethane	22	U	22
Chloroethane	56	U	56
Bromoethene(Vinyl Bromide)	22	U	22
Trichlorofluoromethane	22	U	22
1,1-Dichloroethene	22	U	22
3-Chloropropene	56	U	56
Methylene Chloride	56	U	56
Methyl tert-butyl ether	22	U	22
trans-1,2-Dichloroethene	22	U	22
n-Hexane	22	U	22
1,1-Dichloroethane	22	U	22
cis-1,2-Dichloroethene	22	U	22
1,2-Dichloroethene, Total	22	U	22
Chloroform	22	U	22
1,1,1-Trichloroethane	22	U	22
Cyclohexane	22	U	22
Carbon tetrachloride	22	U	22
2,2,4-Trimethylpentane	22	U	22
Benzene	22	U	22
1,2-Dichloroethane	22	U	22
n-Heptane	22	U	22
Trichloroethene	3500		22
1,2-Dichloropropane	22	U	22
Bromodichloromethane	22	U	22
cis-1,3-Dichloropropene	22	U	22
Toluene	79		22
trans-1,3-Dichloropropene	22	U	22
1,1,2-Trichloroethane	22	U	22
Tetrachloroethene	22	U	22
Dibromochloromethane	22	U	22
1,2-Dibromoethane	22	U	22
Ethylbenzene	180		22
m,p-Xylene	490		56
Xylene, o-	110		22
Xylene (total)	600		22
Bromoform	22	U	22
1,1,2,2-Tetrachloroethane	22	U	22
4-Ethyltoluene	22	U	22
1,3,5-Trimethylbenzene	22	U	22

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	270	U	270

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-IA-1**

Lab Sample ID: 200-3569-1
Client Matrix: Air

Date Sampled: 01/26/2011 1555
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-13365	Instrument ID: C.i
Preparation:	Summa Canister		Lab File ID: cjog021.d
Dilution:	111		Initial Weight/Volume: 29 mL
Date Analyzed:	02/08/2011 1401		Final Weight/Volume: 200 mL
Date Prepared:	02/08/2011 1401		Injection Volume: 200 mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	160	U	160
Vinyl chloride	57	U	57
1,3-Butadiene	49	U	49
Bromomethane	86	U	86
Chloroethane	150	U	150
Bromoethene(Vinyl Bromide)	97	U	97
Trichlorofluoromethane	120	U	120
1,1-Dichloroethene	88	U	88
3-Chloropropene	170	U	170
Methylene Chloride	190	U	190
Methyl tert-butyl ether	80	U	80
trans-1,2-Dichloroethene	88	U	88
n-Hexane	78	U	78
1,1-Dichloroethane	90	U	90
cis-1,2-Dichloroethene	88	U	88
1,2-Dichloroethene, Total	88	U	88
Chloroform	110	U	110
1,1,1-Trichloroethane	120	U	120
Cyclohexane	76	U	76
Carbon tetrachloride	140	U	140
2,2,4-Trimethylpentane	100	U	100
Benzene	71	U	71
1,2-Dichloroethane	90	U	90
n-Heptane	91	U	91
Trichloroethene	19000		120
1,2-Dichloropropane	100	U	100
Bromodichloromethane	150	U	150
cis-1,3-Dichloropropene	100	U	100
Toluene	300		84
trans-1,3-Dichloropropene	100	U	100
1,1,2-Trichloroethane	120	U	120
Tetrachloroethene	150	U	150
Dibromochloromethane	190	U	190
1,2-Dibromoethane	170	U	170
Ethylbenzene	790		96
m,p-Xylene	2100		240
Xylene, o-	460		96
Xylene (total)	2600		96
Bromoform	230	U	230
1,1,2,2-Tetrachloroethane	150	U	150
4-Ethyltoluene	110	U	110
1,3,5-Trimethylbenzene	110	U	110

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-SS-1**

Lab Sample ID: 200-3569-2
Client Matrix: Air

Date Sampled: 01/26/2011 1600
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-12887	Instrument ID: B.i
Preparation:	Summa Canister		Lab File ID: bjwz014.d
Dilution:	16.7		Initial Weight/Volume: 12 mL
Date Analyzed:	01/28/2011 2136		Final Weight/Volume: 200 mL
Date Prepared:	01/28/2011 2136		Injection Volume: 200 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	8.4	U	8.4
1,2-Dichlorotetrafluoroethane	3.3	U	3.3
Vinyl chloride	3.3	U	3.3
1,3-Butadiene	3.3	U	3.3
Bromomethane	3.3	U	3.3
Chloroethane	8.4	U	8.4
Bromoethene(Vinyl Bromide)	3.3	U	3.3
Trichlorofluoromethane	3.3	U	3.3
1,1-Dichloroethene	3.3	U	3.3
3-Chloropropene	8.4	U	8.4
Methylene Chloride	8.4	U	8.4
Methyl tert-butyl ether	3.3	U	3.3
trans-1,2-Dichloroethene	3.3	U	3.3
n-Hexane	36		3.3
1,1-Dichloroethane	3.3	U	3.3
cis-1,2-Dichloroethene	3.3	U	3.3
1,2-Dichloroethene, Total	3.3	U	3.3
Chloroform	3.3	U	3.3
1,1,1-Trichloroethane	3.3	U	3.3
Cyclohexane	51		3.3
Carbon tetrachloride	3.3	U	3.3
2,2,4-Trimethylpentane	3.3	U	3.3
Benzene	9.9		3.3
1,2-Dichloroethane	3.3	U	3.3
n-Heptane	41		3.3
Trichloroethene	390		3.3
1,2-Dichloropropane	3.3	U	3.3
Bromodichloromethane	3.3	U	3.3
cis-1,3-Dichloropropene	3.3	U	3.3
Toluene	33		3.3
trans-1,3-Dichloropropene	3.3	U	3.3
1,1,2-Trichloroethane	3.3	U	3.3
Tetrachloroethene	3.3	U	3.3
Dibromochloromethane	3.3	U	3.3
1,2-Dibromoethane	3.3	U	3.3
Ethylbenzene	13		3.3
m,p-Xylene	43		8.4
Xylene, o-	13		3.3
Xylene (total)	56		3.3
Bromoform	3.3	U	3.3
1,1,2,2-Tetrachloroethane	3.3	U	3.3
4-Ethyltoluene	3.3	U	3.3
1,3,5-Trimethylbenzene	4.4		3.3

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	41	U	41

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-SS-1**

Lab Sample ID: 200-3569-2
Client Matrix: Air

Date Sampled: 01/26/2011 1600
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-12887	Instrument ID: B.i
Preparation:	Summa Canister		Lab File ID: bjwz014.d
Dilution:	16.7		Initial Weight/Volume: 12 mL
Date Analyzed:	01/28/2011 2136		Final Weight/Volume: 200 mL
Date Prepared:	01/28/2011 2136		Injection Volume: 200 mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	23	U	23
Vinyl chloride	8.5	U	8.5
1,3-Butadiene	7.4	U	7.4
Bromomethane	13	U	13
Chloroethane	22	U	22
Bromoethene(Vinyl Bromide)	15	U	15
Trichlorofluoromethane	19	U	19
1,1-Dichloroethene	13	U	13
3-Chloropropene	26	U	26
Methylene Chloride	29	U	29
Methyl tert-butyl ether	12	U	12
trans-1,2-Dichloroethene	13	U	13
n-Hexane	130		12
1,1-Dichloroethane	14	U	14
cis-1,2-Dichloroethene	13	U	13
1,2-Dichloroethene, Total	13	U	13
Chloroform	16	U	16
1,1,1-Trichloroethane	18	U	18
Cyclohexane	170		11
Carbon tetrachloride	21	U	21
2,2,4-Trimethylpentane	16	U	16
Benzene	31		11
1,2-Dichloroethane	14	U	14
n-Heptane	170		14
Trichloroethene	2100		18
1,2-Dichloropropane	15	U	15
Bromodichloromethane	22	U	22
cis-1,3-Dichloropropene	15	U	15
Toluene	130		13
trans-1,3-Dichloropropene	15	U	15
1,1,2-Trichloroethane	18	U	18
Tetrachloroethene	23	U	23
Dibromochloromethane	28	U	28
1,2-Dibromoethane	26	U	26
Ethylbenzene	57		15
m,p-Xylene	190		36
Xylene, o-	56		15
Xylene (total)	240		15
Bromoform	35	U	35
1,1,2,2-Tetrachloroethane	23	U	23
4-Ethyltoluene	16	U	16
1,3,5-Trimethylbenzene	21		16

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-IA-2**

Lab Sample ID: 200-3569-3
Client Matrix: Air

Date Sampled: 01/26/2011 1605
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-13365	Instrument ID:	C.i
Preparation:	Summa Canister		Lab File ID:	cjog022.d
Dilution:	100		Initial Weight/Volume:	34 mL
Date Analyzed:	02/08/2011 1449		Final Weight/Volume:	200 mL
Date Prepared:	02/08/2011 1449		Injection Volume:	200 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	50	U	50
1,2-Dichlorotetrafluoroethane	20	U	20
Vinyl chloride	20	U	20
1,3-Butadiene	20	U	20
Bromomethane	20	U	20
Chloroethane	50	U	50
Bromoethene(Vinyl Bromide)	20	U	20
Trichlorofluoromethane	20	U	20
1,1-Dichloroethene	20	U	20
3-Chloropropene	50	U	50
Methylene Chloride	50	U	50
Methyl tert-butyl ether	20	U	20
trans-1,2-Dichloroethene	20	U	20
n-Hexane	20	U	20
1,1-Dichloroethane	20	U	20
cis-1,2-Dichloroethene	20	U	20
1,2-Dichloroethene, Total	20	U	20
Chloroform	20	U	20
1,1,1-Trichloroethane	20	U	20
Cyclohexane	20	U	20
Carbon tetrachloride	20	U	20
2,2,4-Trimethylpentane	20	U	20
Benzene	20	U	20
1,2-Dichloroethane	20	U	20
n-Heptane	20	U	20
Trichloroethene	2700		20
1,2-Dichloropropane	20	U	20
Bromodichloromethane	20	U	20
cis-1,3-Dichloropropene	20	U	20
Toluene	57		20
trans-1,3-Dichloropropene	20	U	20
1,1,2-Trichloroethane	20	U	20
Tetrachloroethene	20	U	20
Dibromochloromethane	20	U	20
1,2-Dibromoethane	20	U	20
Ethylbenzene	140		20
m,p-Xylene	370		50
Xylene, o-	79		20
Xylene (total)	450		20
Bromoform	20	U	20
1,1,2,2-Tetrachloroethane	20	U	20
4-Ethyltoluene	20	U	20
1,3,5-Trimethylbenzene	20	U	20

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	250	U	250

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-IA-2**

Lab Sample ID: 200-3569-3
Client Matrix: Air

Date Sampled: 01/26/2011 1605
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-13365	Instrument ID:	C.i
Preparation:	Summa Canister		Lab File ID:	cjog022.d
Dilution:	100		Initial Weight/Volume:	34 mL
Date Analyzed:	02/08/2011 1449		Final Weight/Volume:	200 mL
Date Prepared:	02/08/2011 1449		Injection Volume:	200 mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	140	U	140
Vinyl chloride	51	U	51
1,3-Butadiene	44	U	44
Bromomethane	78	U	78
Chloroethane	130	U	130
Bromoethene(Vinyl Bromide)	87	U	87
Trichlorofluoromethane	110	U	110
1,1-Dichloroethene	79	U	79
3-Chloropropene	160	U	160
Methylene Chloride	170	U	170
Methyl tert-butyl ether	72	U	72
trans-1,2-Dichloroethene	79	U	79
n-Hexane	70	U	70
1,1-Dichloroethane	81	U	81
cis-1,2-Dichloroethene	79	U	79
1,2-Dichloroethene, Total	79	U	79
Chloroform	98	U	98
1,1,1-Trichloroethane	110	U	110
Cyclohexane	69	U	69
Carbon tetrachloride	130	U	130
2,2,4-Trimethylpentane	93	U	93
Benzene	64	U	64
1,2-Dichloroethane	81	U	81
n-Heptane	82	U	82
Trichloroethene	15000		110
1,2-Dichloropropane	92	U	92
Bromodichloromethane	130	U	130
cis-1,3-Dichloropropene	91	U	91
Toluene	220		75
trans-1,3-Dichloropropene	91	U	91
1,1,2-Trichloroethane	110	U	110
Tetrachloroethene	140	U	140
Dibromochloromethane	170	U	170
1,2-Dibromoethane	150	U	150
Ethylbenzene	590		87
m,p-Xylene	1600		220
Xylene, o-	340		87
Xylene (total)	2000		87
Bromoform	210	U	210
1,1,2,2-Tetrachloroethane	140	U	140
4-Ethyltoluene	98	U	98
1,3,5-Trimethylbenzene	98	U	98

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-SS-2**

Lab Sample ID: 200-3569-4
Client Matrix: Air

Date Sampled: 01/26/2011 1610
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-12887	Instrument ID: B.i
Preparation:	Summa Canister		Lab File ID: bjwz015.d
Dilution:	20		Initial Weight/Volume: 10 mL
Date Analyzed:	01/28/2011 2229		Final Weight/Volume: 200 mL
Date Prepared:	01/28/2011 2229		Injection Volume: 200 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	10	U	10
1,2-Dichlorotetrafluoroethane	4.0	U	4.0
Vinyl chloride	4.0	U	4.0
1,3-Butadiene	4.0	U	4.0
Bromomethane	4.0	U	4.0
Chloroethane	10	U	10
Bromoethene(Vinyl Bromide)	4.0	U	4.0
Trichlorofluoromethane	4.0	U	4.0
1,1-Dichloroethene	4.0	U	4.0
3-Chloropropene	10	U	10
Methylene Chloride	10	U	10
Methyl tert-butyl ether	4.0	U	4.0
trans-1,2-Dichloroethene	4.0	U	4.0
n-Hexane	7.4		4.0
1,1-Dichloroethane	4.0	U	4.0
cis-1,2-Dichloroethene	4.0	U	4.0
1,2-Dichloroethene, Total	4.0	U	4.0
Chloroform	4.0	U	4.0
1,1,1-Trichloroethane	4.0	U	4.0
Cyclohexane	9.9		4.0
Carbon tetrachloride	4.0	U	4.0
2,2,4-Trimethylpentane	4.0	U	4.0
Benzene	4.0	U	4.0
1,2-Dichloroethane	4.0	U	4.0
n-Heptane	9.9		4.0
Trichloroethene	410		4.0
1,2-Dichloropropane	4.0	U	4.0
Bromodichloromethane	4.0	U	4.0
cis-1,3-Dichloropropene	4.0	U	4.0
Toluene	9.0		4.0
trans-1,3-Dichloropropene	4.0	U	4.0
1,1,2-Trichloroethane	4.0	U	4.0
Tetrachloroethene	4.0	U	4.0
Dibromochloromethane	4.0	U	4.0
1,2-Dibromoethane	4.0	U	4.0
Ethylbenzene	15		4.0
m,p-Xylene	37		10
Xylene, o-	7.5		4.0
Xylene (total)	44		4.0
Bromoform	4.0	U	4.0
1,1,2,2-Tetrachloroethane	4.0	U	4.0
4-Ethyltoluene	4.0	U	4.0
1,3,5-Trimethylbenzene	4.0	U	4.0

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	49	U	49

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-SS-2**

Lab Sample ID: 200-3569-4
Client Matrix: Air

Date Sampled: 01/26/2011 1610
Date Received: 01/27/2011 1000

TO-15 Volatile Organic Compounds in Ambient Air

Method:	TO-15	Analysis Batch: 200-12887	Instrument ID:	B.i	
Preparation:	Summa Canister		Lab File ID:	bjwz015.d	
Dilution:	20		Initial Weight/Volume:	10	mL
Date Analyzed:	01/28/2011 2229		Final Weight/Volume:	200	mL
Date Prepared:	01/28/2011 2229		Injection Volume:	200	mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	28	U	28
Vinyl chloride	10	U	10
1,3-Butadiene	8.8	U	8.8
Bromomethane	16	U	16
Chloroethane	26	U	26
Bromoethene(Vinyl Bromide)	17	U	17
Trichlorofluoromethane	22	U	22
1,1-Dichloroethene	16	U	16
3-Chloropropene	31	U	31
Methylene Chloride	35	U	35
Methyl tert-butyl ether	14	U	14
trans-1,2-Dichloroethene	16	U	16
n-Hexane	26		14
1,1-Dichloroethane	16	U	16
cis-1,2-Dichloroethene	16	U	16
1,2-Dichloroethene, Total	16	U	16
Chloroform	20	U	20
1,1,1-Trichloroethane	22	U	22
Cyclohexane	34		14
Carbon tetrachloride	25	U	25
2,2,4-Trimethylpentane	19	U	19
Benzene	13	U	13
1,2-Dichloroethane	16	U	16
n-Heptane	41		16
Trichloroethene	2200		21
1,2-Dichloropropane	18	U	18
Bromodichloromethane	27	U	27
cis-1,3-Dichloropropene	18	U	18
Toluene	34		15
trans-1,3-Dichloropropene	18	U	18
1,1,2-Trichloroethane	22	U	22
Tetrachloroethene	27	U	27
Dibromochloromethane	34	U	34
1,2-Dibromoethane	31	U	31
Ethylbenzene	64		17
m,p-Xylene	160		43
Xylene, o-	33		17
Xylene (total)	190		17
Bromoform	41	U	41
1,1,2,2-Tetrachloroethane	27	U	27
4-Ethyltoluene	20	U	20
1,3,5-Trimethylbenzene	20	U	20

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-OA-1**

Lab Sample ID: 200-3569-5
Client Matrix: Air

Date Sampled: 01/26/2011 1615
Date Received: 01/27/2011 1000

TO15 LL Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Method:	TO15 LL	Analysis Batch: 200-13601	Instrument ID: E.i
Preparation:	Summa Canister		Lab File ID: eehba006.d
Dilution:	4.0		Initial Weight/Volume: 125 mL
Date Analyzed:	02/10/2011 1838		Final Weight/Volume: 500 mL
Date Prepared:	02/10/2011 1838		Injection Volume: 500 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	0.46		0.040
1,2-Dichlorotetrafluoroethane	0.040	U *	0.040
Vinyl chloride	0.080	U *	0.080
1,3-Butadiene	0.080	U *	0.080
Bromomethane	0.080	U	0.080
Chloroethane	0.080	U	0.080
Bromoethene(Vinyl Bromide)	0.080	U	0.080
Trichlorofluoromethane	0.25		0.040
1,1-Dichloroethene	0.040	U	0.040
3-Chloropropene	0.080	U	0.080
Methylene Chloride	0.80	U ^ *	0.80
Methyl tert-butyl ether	0.040	U	0.040
trans-1,2-Dichloroethene	0.040	U	0.040
n-Hexane	0.24	*	0.080
1,1-Dichloroethane	0.040	U	0.040
cis-1,2-Dichloroethene	0.040	U	0.040
Chloroform	0.040	U	0.040
1,1,1-Trichloroethane	0.040	U	0.040
Cyclohexane	0.055		0.040
Carbon tetrachloride	0.063		0.040
2,2,4-Trimethylpentane	0.089		0.040
Benzene	0.27		0.040
1,2-Dichloroethane	0.080	U	0.080
n-Heptane	0.10		0.040
Trichloroethene	3.1		0.040
1,2-Dichloropropane	0.080	U	0.080
Bromodichloromethane	0.040	U	0.040
cis-1,3-Dichloropropene	0.040	U	0.040
Toluene	0.45		0.040
trans-1,3-Dichloropropene	0.040	U	0.040
1,1,2-Trichloroethane	0.040	U	0.040
Tetrachloroethene	0.040	U	0.040
Dibromochloromethane	0.040	U	0.040
1,2-Dibromoethane	0.040	U	0.040
Ethylbenzene	0.13		0.040
o-Xylene	0.11		0.040
Bromoform	0.040	U	0.040
1,1,2,2-Tetrachloroethane	0.040	U	0.040
4-Ethyltoluene	0.040	U	0.040
1,3,5-Trimethylbenzene	0.080	U	0.080
1,2-Dichloroethene, Total	0.040	U	0.040
m-Xylene & p-Xylene	0.38		0.080
Xylenes, Total	0.50		0.040

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	2.3		0.20

Client: MACTEC Engineering and Consulting Inc

Job Number: 200-3569-1
Sdg Number: 200-3569

Client Sample ID: **AE-OA-1**

Lab Sample ID: 200-3569-5
Client Matrix: Air

Date Sampled: 01/26/2011 1615
Date Received: 01/27/2011 1000

TO15 LL Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Method:	TO15 LL	Analysis Batch: 200-13601	Instrument ID:	E.i	
Preparation:	Summa Canister		Lab File ID:	eehba006.d	
Dilution:	4.0		Initial Weight/Volume:	125	mL
Date Analyzed:	02/10/2011 1838		Final Weight/Volume:	500	mL
Date Prepared:	02/10/2011 1838		Injection Volume:	500	mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	0.28	U *	0.28
Vinyl chloride	0.20	U *	0.20
1,3-Butadiene	0.18	U *	0.18
Bromomethane	0.31	U	0.31
Chloroethane	0.21	U	0.21
Bromoethene(Vinyl Bromide)	0.35	U	0.35
Trichlorofluoromethane	1.4		0.22
1,1-Dichloroethene	0.16	U	0.16
3-Chloropropene	0.25	U	0.25
Methylene Chloride	2.8	U ^ *	2.8
Methyl tert-butyl ether	0.14	U	0.14
trans-1,2-Dichloroethene	0.16	U	0.16
n-Hexane	0.86	*	0.28
1,1-Dichloroethane	0.16	U	0.16
cis-1,2-Dichloroethene	0.16	U	0.16
Chloroform	0.20	U	0.20
1,1,1-Trichloroethane	0.22	U	0.22
Cyclohexane	0.19		0.14
Carbon tetrachloride	0.40		0.25
2,2,4-Trimethylpentane	0.42		0.19
Benzene	0.85		0.13
1,2-Dichloroethane	0.32	U	0.32
n-Heptane	0.43		0.16
Trichloroethene	17		0.21
1,2-Dichloropropane	0.37	U	0.37
Bromodichloromethane	0.27	U	0.27
cis-1,3-Dichloropropene	0.18	U	0.18
Toluene	1.7		0.15
trans-1,3-Dichloropropene	0.18	U	0.18
1,1,2-Trichloroethane	0.22	U	0.22
Tetrachloroethene	0.27	U	0.27
Dibromochloromethane	0.34	U	0.34
1,2-Dibromoethane	0.31	U	0.31
Ethylbenzene	0.58		0.17
o-Xylene	0.50		0.17
Bromoform	0.41	U	0.41
1,1,2,2-Tetrachloroethane	0.27	U	0.27
4-Ethyltoluene	0.20	U	0.20
1,3,5-Trimethylbenzene	0.39	U	0.39
1,2-Dichloroethene, Total	0.16	U	0.16
m-Xylene & p-Xylene	1.7		0.35
Xylenes, Total	2.2		0.17