September 3, 2010
Ref. No. 31129-077

Mr. Jaspal Walia
Project Manager
New York State Department of Environmental Conservation, Region 9
270 Michigan Avenue
Buffalo, NY 14203-2999

Subject: Indoor Air and Sub-Slab Soil Vapor Sampling Results
Leica, Inc. Site; Erie County, Cheektowaga, New York
Inactive Hazardous Waste Disposal Site No. 915156

Dear Mr. Walia:

Enclosed you will find the results of the indoor air and sub-slab soil vapor sampling event conducted at the Leica, Inc. facility on March 23, 2010. This date is within the acceptable time frame for the winter heating season as recommended in the New York State Department of Health (NYSDOH) guidance. The samples were collected from four locations inside the building at the main warehouse area, loading dock, basement, and main entry areas. In addition, one vapor sample was collected at a background location east of the building. See the attached Figure 1 for sample locations.

Indoor air and sub-slab vapor samples were collected to evaluate the effectiveness of the HRC compound injected in the area in 2008, and as a follow up to a previous sampling event conducted in December 2008. Based on the fact that a NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form was completed during past sampling events, and the effects of ancillary stored chemicals are expected to be relatively insignificant compared to the effects from the existing contamination, we did not complete another survey for this sampling event.

Samples were collected in approximately the same location as the December 2008 samples, and in substantial accordance with the September 2006 "Supplemental Area B Indoor Air and Sub-Slab Soil Gas Sampling Plan" and in compliance with NYSDOH guidance. Six liter SUMMA canisters were used for sample collection and sampling occurred over a twenty-four hour period using an appropriate regulator provided by the laboratory. Teflon™ tubing was used for sample collection with the end of the tubing connected to a 3-way valve.

A length of the Teflon™ tubing was connected to the SUMMA canister and one length connected to a photoionization detection (PID) with a low-flow vacuum air pump. The 3-way valve was opened towards the PID and vacuum pump to allow for purging of three volumes of the tubing and monitoring of the air. Following purging activities, the vacuum pump was turned off and the 3-way valve opened to allow airflow towards the SUMMA canister.

The SUMMA canisters were relinquished under chain-of-custody to Columbia Analytical Services for analysis on March 24, 2010. The samples were analyzed using United States Environmental Protection Agency (EPA) Method TO-15. A copy of the Sampling Plan is included as Appendix A.

Sample results were compared to published guidance values. The (NYSDOH) has established indoor air and sub-slab vapor concentration action levels for several volatile organic compounds (VOCs) in the guidance document entitled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," published in October 2006. A copy of the summary table showing the results of the vapor survey is included as Table 1.

Trichloroethylene (TCE) the contaminant most frequently detected during the vapor intrusion survey, was detected in all samples collected from within the building. The highest TCE concentration of 190,000 micrograms per cubic meter ($\mu g/m^3$), was detected in the Entryway sub-slab sample (SB-1). The highest indoor air concentration of TCE was also detected in the Entryway air sample (IA-1). The TCE concentrations are above the NYSDOH mitigation action levels for all four areas tested.

The NYSDOH Guidance Matrix values are included in Table 1. The Guidance matrix uses two values from the sub-slab and ambient air samples at each location to determine the recommended action. The most recent data has been color coded to show which component, the sub-slab or ambient air data, is the driving component for the recommended action. In general, the sub-slab concentrations are elevated such that they are the driving component in the matrix. All seven compounds (carbon tetrachloride, 1,1-dichloroethene [1,1-DCE], cis-1,2-dichloroethene [1,2-DCE], tetrachloroethene [PCE], 1,1,1-trichloroethane [TCA], TCE, and vinyl chloride) detected in the entryway sub-slab data are the driving component for mitigation. In concert with the sub-slab data, ambient air data for the 1,1,1-trichloroethane (TCA) and TCE were also driving components for the entryway samples.

The basement area had the next highest concentration of TCE in the sub-slab at 25,000 $\mu g/m^3$ (22,000 $\mu g/m^3$) followed by the loading dock sub-slab sample at 12,000 $\mu g/m^3$, and the warehouse area sub-slab sample at 260 $\mu g/m^3$ (190 $\mu g/m^3$ for the duplicate). For the warehouse area, the ambient air concentration of 9 $\mu g/m^3$ was the driving component for mitigation in the matrix. The second result for the basement area sample was due to a result that exceeded the calibration range and thus required a dilution and reanalysis of the sample by the laboratory. The laboratory data is included as Appendix B.

TCA was an additional driving component for mitigation in the loading dock and basement area sub-slab samples.

Carbon tetrachloride was present in the background outdoor air sample at a concentration of 0.63 µg/m^3, above the NYSDOH minimum indoor air action threshold of 0.25 µg/m^3. PCE, TCA, and TCE were all detected at estimated concentrations in the background air sample, but all concentrations were below the minimum action threshold concentrations.

Though many of the VOC concentrations remain elevated, most VOC concentrations have decreased since the December 2008 sampling event. All indoor air concentrations are below the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) in every case.

As required by NYSDOH guidance, a mitigation plan for the detected VOCs will be prepared for the SamSon facility and submitted to the NYSDEC for approval. As proposed during our telephone conversation on July 30, 2010, we anticipate submitting the mitigation plan by September 30, 2010.

Please let me know when you have had an opportunity to review this information. I would like to review our general mitigation approach with you before beginning final preparation of the plan. In the interim, if you have any questions regarding this report, please feel free to call me at 801-303-1092.

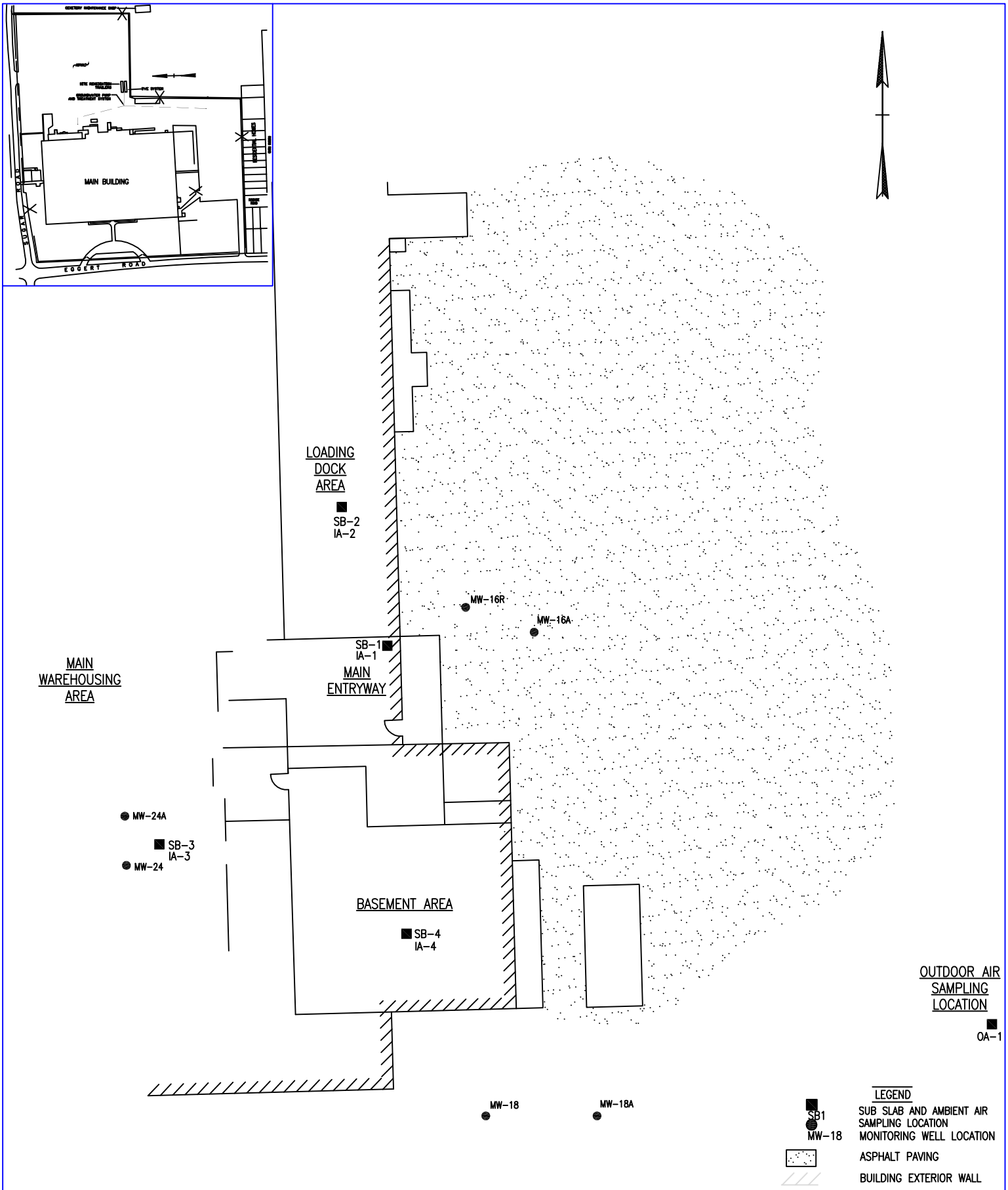
Sincerely,

Robert E. McPeak, Jr., P.E., LEP
Department Manager, Environmental Services

Enclosure
cc: J. Egan
C. Grabinski
C. O'Connor, NYSDOH

FIGURE 1

MARCH 2010 INDOOR AIR AND SUB SLAB VAPOR SAMPLING LOCATIONS AREA "B"



DOCUMENT CONTROL NO.	PROJECT	LEICA, INC. EGGERT & SUGAR ROADS CHEEKOTOWAGA, NEW YORK	PROJECT # 137015 FILENAME:
REVISION NO.	DRAWING	MARCH 2010 INDOOR AIR AND SUB SLAB VAPOR SAMPLING LOCATIONS AREA "B"	SCALE: DATE: 8/31/10 BY: DRS CK: RM FIGURE # 1

ENERGY SOLUTIONS
100 MILL PLAIN RD
FLOOR 2, MAILBOX 106
DANBURY, CT 06811
(203) 797-8301

TABLE 1

SUMMARY OF SUB-SLAB AND INDOOR AIR SAMPLES

Prepared by:PWM
Date: 4/29/10
Checked by: REM
Date:

Table 1
Summary of Sub-Slab and Indoor Air Samples
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	Minimum Action Thresholds (ug/m^3)						SS3		SB-1		SB-1		SB-1			AA3C		IA-1		IA-1		IA-1	
Sample Area:							ENTRYWAY SUB SLAB									ENTRYWAY AMBIENT AIR							
Lab ID#	Matrix 1 Indoor Air	Matrix 1 Sub Slab Vapor	Matrix 2 Indoor Air	Matrix 2 Sub Slab Vapor	OSHA PELs (ug/m3)		965225		1106315		1162643		R1001548-001			965236		1106317		1162645		R1001548-002	
Sample Collection Date:							12/20/2006		6/12/2008		12/12/2008		3/23/2010			12/20/2006		6/12/2008		12/12/2008		3/23/2010	
Analitical Dilution:							3143		14900		781		1.36			2		1.52		1.41		1.54	
Volatile Organic Compounds (mcg/m3)																							
carbon tetrachloride	0.25	5	---	---	62700		ND		**2100**	U	**110**	U	**320**	U		**0.5**		**0.61**		**0.64**		**0.57**	
1,1-dichloroethene	---	---	3	100	400000		**3300**		**6500**	D	**340**	U	**2000**			1.2	U	0.66	U	0.61	U	0.2	J
cis-1,2-dichloroethene	---	---	3	100	NE		**5500**		**23000**	D	**1900**	D	**8800**			ND		1.2		0.64		0.69	
tetrachloroethene	---	---	3	100	678000		ND		**2200**	U	**120**	U	**740**			ND		0.27		0.22		0.18	
1,1,1-trichloroethane	---	---	3	100	1900000		**180000**		**260000**	D	**13000**	D	**91000**			**9.3**		**12**		**4.3**		**8.2**	
trichloroethene	0.25	5	---	---	537000		**91000**		**480000**	D	**32000**	D	**190000**			**16**		**18**		**12**		**17**	
vinyl chloride	0.25	5	---	---	1280		ND		**4200**	U	**220**	U	**270**	U		ND		**0.43**	U	**0.4**	U	0.092	U

NOTES:
Bold = Exceeds applicable air matricies
ND = Not Detected
B = Analyte detected in method blank
D = Sample reanalyzed and quantified at higher dilution
E = Exceeds calibration range
J = Estimated concentration
U = Analyte was not detected
NE = Not Established

NYSDOH Guidance Matrix Recommended Actions Legend

* Driving Matrix Component for Action	** Secondary Matrix Component for Action	Action
		No Further Action
		Monitor
		Mitigate

***** At this concentration, the specified action is required, at a minimum, regardless of the concentrations in the alternate media (subslab or ambient air).
****** At this concentration, a less aggressive action might be acceptable if the concentrations in the alternate media (subslab or ambient air) are reduced.

Prepared by:PWM
Date: 4/29/10
Checked by: REM
Date:

Table 1
Summary of Sub-Slab and Indoor Air Samples
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	Minimum Action Thresholds (ug/m^3)					SS7		SB-3		SB-3		SB-3		SB-3		SB-3		AA7A		IA-3		IA-3		IA-3	
Sample Area:						WAREHOUSE AREA SUB SLAB												WAREHOUSE AREA AMBIENT AIR							
Lab ID#	Matrix 1 Indoor Air	Matrix 1 Sub Slab Vapor	Matrix 2 Indoor Air	Matrix 2 Sub Slab Vapor	OSHA PELs (ug/m3)	965232		1106320		1162648		R1001548-005		R1001548-005		Duplicate		965233		1106321		1162649		R1001548-012	
Sample Collection Date:						12/20/2006		6/12/2008		12/12/2008		3/23/2010		3/23/2010		3/23/2010		12/20/2006		6/12/2008		12/12/2008		3/23/2010	
Analitical Dilution:						36.7		59.2		14.5		1.49		1.49		1		4		2.92		1.42		1.38	
Volatile Organic Compounds (mcg/m3)																									
carbon tetrachloride	0.25	5	---	---	62700	ND		**8.2**	U	2	U	**13**	U	**26**	U	**22**	U	ND		**0.64**		**0.6**		**0.62**	
1,1-dichloroethene	---	---	3	100	400000	22	U	26	U	6.3	U	84	U	160	U	**140**	U	2.4	U	1.3	U	0.62	U	0.03	J
cis-1,2-dichloroethene	---	---	3	100	NE	**220**	D	**300**	D	**110**		43	J	44	DJ	33	J	ND		1.3	U	0.62	U	0.35	J
tetrachloroethene	---	---	3	100	678000	31		64	D	18		36		31	D	29		ND		0.44	U	0.21	U	0.14	
1,1,1-trichloroethane	---	---	3	100	1900000	ND		48	D	9.7		14	J	42	DJ	13	J	ND		1.8	U	0.85	U	0.57	J
trichloroethene	0.25	5	---	---	537000	**1500**	D	**3100**	D	**660**		220		260	D	190		**8.1**		**4.9**		**5.7**		**9**	
vinyl chloride	0.25	5	---	---	1280	ND		**17**	U	**8.4**		**11**	U	**22**	U	**19**	U	ND		**0.82**	U	**0.4**	U	0.083	U

NOTES:
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D = Sample reanalyzed and quantified at higher dilution
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U = Analyte was not detected
NE = Not Established

NYSDOH Guidance Matrix Recommended Actions Legend

* Driving Matrix Component for Action	** Secondary Matrix Component for Action	Action
		No Further Action
		Monitor
		Mitigate

* At this concentration, the specified action is required, at a minimum, regardless of the concentr
** At this concentration, a less aggressive action might be acceptable if the concentrations in the

Prepared by:PWM
Date: 4/29/10
Checked by: REM
Date:

Table 1
Summary of Sub-Slab and Indoor Air Samples
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	Minimum Action Thresholds (ug/m^3)						SS2		SB-2		SB-2		SB-2			AA1A		IA-2		IA-2		IA-2	
Sample Area:							LOADING DOCK SUB SLAB									LOADING DOCK AMBIENT AIR							
Lab ID#	Matrix 1 Indoor Air	Matrix 1 Sub Slab Vapor	Matrix 2 Indoor Air	Matrix 2 Sub Slab Vapor	OSHA PELs (ug/m3)		965237		1106318		1162647		R1001548-003			965235		1106319		1162646		R1001548-004	
Sample Collection Date:							12/20/2006		6/12/2008		12/12/2008		3/23/2010			12/20/2006		6/12/2008		12/12/2008		3/23/2010	
Analitical Dilution:							100		1788		141		1.46			2		2.98		1.41		1.42	
Volatile Organic Compounds (mcg/m3)																							
carbon tetrachloride	0.25	5	---	---	62700		ND		**250**	U	**20**	U	**16**	U		**0.51**		**0.75**		**0.59**		**0.57**	
1,1-dichloroethene	---	---	3	100	400000		60	U	**780**	U	61	U	**100**	U		1.2	U	1.3	U	0.61	U	0.62	U
cis-1,2-dichloroethene	---	---	3	100	NE		ND		**780**	U	77	D	**130**			ND		1.3	U	0.61	U	0.19	J
tetrachloroethene	---	---	3	100	678000		28		**1200**	D	77	D	**190**			0.55		0.58		0.21	U	0.27	
1,1,1-trichloroethane	---	---	3	100	1900000		**430**		**11000**	D	**920**	D	**1900**			ND		1.8	U	0.85	U	0.22	J
trichloroethene	0.25	5	---	---	537000		**5000**	D	**75000**	D	**5100**	D	**12000**			**5.5**		**5.1**		**4.7**		**4.4**	
vinyl chloride	0.25	5	---	---	1280		ND		**500**	U	**62**	D	**14**	U		ND		**0.84**	U	**0.4**	U	0.085	U

NOTES:
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NYSDOH Guidance Matrix Recommended Actions Legend

* Driving Matrix Component for Action	** Secondary Matrix Component for Action	Action
		No Further Action
		Monitor
		Mitigate

***** At this concentration, the specified action is required, at a minimum, regardless of the concentı
****** At this concentration, a less aggressive action might be acceptable if the concentrations in the

Prepared by:PWM
Date: 4/29/10
Checked by: REM
Date:

Table 1
Summary of Sub-Slab and Indoor Air Samples
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	Minimum Action Thresholds (ug/m^3)					SS5		SB-4		SB-4		SB-4		SB-4		AA5A		IA-4		IA-4		IA-4	
Sample Area:						BASEMENT AREA SUB SLAB										BASEMENT AREA AMBIENT AIR							
Lab ID#	Matrix 1 Indoor Air	Matrix 1 Sub Slab Vapor	Matrix 2 Indoor Air	Matrix 2 Sub Slab Vapor	OSHA PELs (ug/m3)	965229		1106322		1162650		R1001548-007		R1001548-007		965230		1106323		1162651		R1001548-008	
Sample Collection Date:						12/20/2006		6/12/2008		12/12/2008		3/23/2010		3/23/2010		12/20/2006		6/12/2008		12/12/2008		3/23/2010	
Analitical Dilution:						1571		1430		633.6		1.4		1.4		1		1.47		1.35		1.44	
Volatile Organic Compounds (mcg/m3)																							
carbon tetrachloride	0.25	5	---	---	62700	ND		**200**	U	**88**	U	**25**	U	**49**	U	**0.61**		**0.6**		**0.6**		**0.71**	
1,1-dichloroethene	---	---	3	100	400000	**3200**		**1000**	D	**280**	U	**520**		**440**	D	0.6	U	0.64	U	0.59	U	0.63	U
cis-1,2-dichloroethene	---	---	3	100	NE	**3200**		**870**	D	**520**	D	**460**		**390**	D	ND		0.64	U	0.59	U	0.11	J
tetrachloroethene	---	---	3	100	678000	**16000**		**430**	D	**250**	D	**340**		**290**	D	0.28		0.22	U	0.2	U	0.076	J
1,1,1-trichloroethane	---	---	3	100	1900000	**110000**		**15000**	D	**3900**	D	**5100**		**4400**	D	1.1		1.2		1.2		0.19	J
trichloroethene	0.25	5	---	---	537000	**110000**		**59000**	D	**25000**	D	**25000**	E	**22000**	D	**1.4**		**1.1**		**0.92**		**0.35**	
vinyl chloride	0.25	5	---	---	1280	ND		**400**	U	**180**	U	**22**	U	**42**	U	ND		**0.41**	U	**0.38**	U	0.086	U

NOTES:
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NYSDOH Guidance Matrix Recommended Actions Legend

* Driving Matrix Component for Action	** Secondary Matrix Component for Action	Action
		No Further Action
		Monitor
		Mitigate

* At this concentration, the specified action is required, at a minimum, regardless of the concentr
** At this concentration, a less aggressive action might be acceptable if the concentrations in the

Prepared by:PWM
Date: 4/29/10
Checked by: REM
Date:

Table 1
Summary of Sub-Slab and Indoor Air Samples
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	Minimum Action Thresholds (ug/m^3)						SS4		OA-1		QA-1		QA	
Sample Area:							OUTDOOR AIR SAMPLE (BACKGROUND)							
Lab ID#	Matrix 1 Indoor Air	Matrix 1 Sub Slab Vapor	Matrix 2 Indoor Air	Matrix 2 Sub Slab Vapor	OSHA PELs (ug/m3)		965228		1106351		1162652		R1001548-010	
Sample Collection Date:							12/20/2006		6/12/2008		12/12/2008		3/23/2010	
Analitical Dilution:							20		1.57		1.36		1.39	
Volatile Organic Compounds (mcg/m3)														
carbon tetrachloride	0.25	5	---	---	62700		ND		**0.59**		**0.63**		**0.1**	
1,1-dichloroethene	---	---	3	100	400000		**12**	U	0.68	U	0.59	U	0.61	U
cis-1,2-dichloroethene	---	---	3	100	NE		**120**		0.68	U	0.59	U	0.15	U
tetrachloroethene	---	---	3	100	678000		**5.6**		**3.2**		0.2	U	0.1	J
1,1,1-trichloroethane	---	---	3	100	1900000		**55**		0.94	U	0.82	U	0.011	J
trichloroethene	0.25	5	---	---	537000		**890**		**8.1**		0.23		0.0058	J
vinyl chloride	0.25	5	---	---	1280		ND		**0.44**	U	**0.38**	U	**0.33**	U

NOTES:
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NYSDOH Guidance Matrix Recommended Actions Legend

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		No Further Action
		Monitor
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***** At this concentration, the specified action is required, at a minimum, regardless of the concentr
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APPENDIX A

SUPPLEMENTAL AREA B INDOOR AIR AND SUB-SLAB SOIL GAS SAMPLING PLAN

SUPPLEMENTAL AREA B INDOOR AIR AND SUB-SLAB SOIL GAS SAMPLING PLAN

FOR THE

LEICA, INC. SITE
CHEEKTOWAGA, NEW YORK

Prepared for:

LEICA, INC.
OPTICAL PRODUCTS DIVISION
2345 WAUKEGAN ROAD
BANNOCKBURN, IL 60015

PREPARED BY
Energy*Solutions*, LLC
143 WEST STREET
NEW MILFORD, CT 06776

SEPTEMBER 2006

ENERGY*SOLUTIONS*

SUPPLEMENTAL AREA B INDOOR AIR AND SUB-SLAB SOIL GAS SAMPLING PLAN

FOR THE

LEICA, INC. SITE
CHEEKTOWAGA, NEW YORK

Prepared for:

LEICA, INC.
OPTICAL PRODUCTS DIVISION
2345 WAUKEGAN ROAD
BANNOCKBURN, IL 60015

PREPARED BY
Energy*Solutions*, LLC
143 WEST STREET
NEW MILFORD, CT 06776

SEPTEMBER 2006

ENERGY*SOLUTIONS*

Robert E. McPeak, Jr., P.E., LEP — Date
Department Manager, Environmental Services

ENERGYSOLUTIONS

TABLE OF CONTENTS **PAGE**

FIGURES

ATTACHMENT 1

ATTACHMENT 2

ENERGYSOLUTIONS

1.0 INTRODUCTION

Energy*Solutions* has prepared this scope of work on behalf of Leica, Inc. (Leica) for the completion of a Vapor Intrusion Investigation at the Samson Distributing warehouse facility located at the intersection of Eggert and Sugar Roads in Cheektowaga, NY (the Site). The facility was formerly operated by Leica for the manufacturing of optical instruments. Samson currently utilizes the facility for warehousing of a variety of manufactured household goods. A Site Location map is provided as Figure 1.

1.1 Objectives

Vapor intrusion is the process by which volatile chemicals migrate through the soil column from a subsurface source (subsurface vapor) into the indoor air of a building. The scope of work presented in this Work Plan was designed to facilitate the collection of vapor data to evaluate the potential for vapor intrusion at the Site. Contaminants of concern detected in soils beneath the building at concentrations above the site Remedial Action Objectives (RAOs) include trichloroethylene, 1,1,1 trichloroethane, and Xylene as well as other VOCs detected in soils and soil vapor beneath the Samson facility at lower concentrations. The objective of the sampling effort will be to assess the concentrations of these contaminants within the sub-slab soil gas and also within the indoor air at the facility.

Specifically, eight sub-slab vapor samples, four indoor air samples and an outdoor air sample will be collected as part of this scope of work to characterize soil vapor below the building, and the air within, and surrounding the building. This vapor intrusion survey will be conducted in accordance with the New York State Department of Health (NYSDOH) Draft document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", dated February 2005 (NYSDOH, 2005). Sub-slab vapor samples will be collected in the locations specified in this plan which were selected based on available soil gas data, knowledge of the specific sensitive uses of the building (areas where employees congregate) and knowledge of the location of soil contamination beneath the building floor.

2.0 SCOPE OF WORK

In order to meet the objectives of this scope of work, the following tasks will be completed:

- Task 1 – Pre-Sampling Building Survey and Product Inventory; and
- Task 2 – Sample Collection and Analysis.

A detailed description of each is provided below.

2.1 Task 1 – Pre-Sampling Building Survey and Product Inventory

In accordance with the NYSDOH Draft Guidance (NYSDOH, 2005), a pre-sampling building survey will be performed prior to sampling within the building. The purpose of this pre-sampling building survey is to identify, and minimize conditions that may interfere with the collection of accurate and representative samples. Potential conditions that may interfere with sample collection may include, but are not limited to the storage of products containing volatile organic compounds (VOCs), freshly painted surfaces, new carpet, the use of petroleum products, etc. The building survey will evaluate the type of building structure, floor layout, airflow patterns, and the physical condition of the building. Additionally, a product inventory will be completed to identify any potential sources of indoor air contamination by characterizing the occurrence and use of chemicals and products throughout the building. All information gathered during the pre-sampling building survey and the product inventory will be recorded on the NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form (provided as Attachment 1). As shown on Attachment 1, the following information will be recorded:

- Owner or landlord information;
- Building characteristics (e.g., residential type, number of units, number of floors, building age, etc.);
- Construction characteristics, including foundation cracks and utility penetrations, ceiling construction and firewall separations, or other openings that may serve as preferential pathways for gas intrusion;
- Heating, ventilation, and air conditioning systems, including the type of heating system(s), type of fuel used, presence of a boiler/furnace, presence of aboveground or underground storage tanks, type(s) of air conditioning, and the presence of air distribution ducts;

- Factors that may influence indoor air quality, petroleum-powered machines stored in the basement, workshop area, smoking in the basement, exhaust fans in the basement, new carpets, fresh paints, chemical storage, etc.; and
- Type of water supply and sewage disposal.

As part of the product inventory, if available, specific chemical ingredients for each product will be listed. If specific chemical ingredients are not presented on the product label, the products full name, and the manufacturer's name and contact information will be recorded. Photographs will be taken as appropriate to document the building survey and product inventory activities.

A portable photoionization detector (PID) will be used as part of the pre-sampling building survey and product inventory to help identify potential sources of VOCs. If any chemicals on-site are found to be stored in a questionable manner (i.e., open container, yield positive PID screening results, emit odor, etc.) they will be controlled to eliminate potential interference. Control options may include removal of the container or ensuring containers are tightly closed. If corrective actions are required, sampling will not be conducted for a period of 24-hours following the corrective action to allow the building to equilibrate. Additionally, as specified in the NYSDOH Draft Guidance (NYSDOH, 2005), it will be requested that building occupants refrain from the activities listed below for a period of 24-hours prior to, and during the sampling activities:

- Opening any windows, openings or vents within the building;
- Operating any ventilation fans within the building;
- Smoking in the building;
- Painting within the building;
- Using air fresheners or scented candles;
- Allowing containers of gasoline or oil to remain within the building, except for fuel oil tanks;
- Cleaning, waxing or polishing furniture, floors or other woodwork with petroleum or oil-based products within the building;

- Engaging in any activities that use materials containing VOCs within the building;
- Lawn mowing or paving;
- Applying pesticides; and
- Using building repair or maintenance products, such as caulk or roofing tar.

2.2 Task 2 – Sample Collection and Analysis

The collection of eight sub-slab vapor samples and four indoor air samples is proposed from within the approximate 6000 square foot footprint of the building in the immediate vicinity of the contaminated sub-surface soils. Additionally, one outdoor air sample will be collected from a representative unaffected location, near the building structure. All samples will be collected in 6 litre SUMA canisters equipped with a pre-calibrated regulator designed to restrict flow to allow sample collection over a 24-hour period.

Specific Q/A procedure normally used to maintain the samples at 4°C are not required with SUMMA canisters. Valves on the canisters will be closed tight and the canisters will be transported to the Columbia Analytical Services of Rochester, NY via courier under standard chain of custody. A description of the sampling methods, Q/A samples and analysis for each type of sample is provided below.

2.2.1 Sub-Slab Vapor Samples

Sub-Slab vapor samples will be collected in the locations shown on Figure 2. Sample locations are focused in the general vicinity of the loading dock at the northeast corner of the facility. This area is known to be the locus of elevated contaminant concentrations in soil and soil gas based on previous sampling. A soil gas survey which provided contaminant results in total mass was performed in June of 2005. Results of this survey are included in Attachment 2. Based on these results, it is clear that the concentrations of soil gas are highest near the south end of the loading dock and the basement and are significantly reduce within approximately 50 feet to the west toward the central areas of the building. Based on these results, areas of the building which are of particular concern include Areas 1, 2, 3, 4, 5, 6, 7 and 8 as shown on Figure 2. Most of the

areas are representative of smaller confined rooms within the building located above the detected elevated concentrations. Areas were also selected based on knowledge regarding locations of foundation walls and other sub-floor structures such as the loading dock and the basement. Interior walls dividing these rooms are shown in the Figure. Areas 1 and 7 are representative of larger open warehousing areas to the west of these smaller rooms.

In addition to the soil gas survey completed in June of 2005, additional sampling of soils beneath the building and the paved area to the east of the loading dock was also completed in December of 2005 and March of 2006. Results of this sub-slab soil sampling are shown on Figure 2 in light text. Soil sampling results corroborated the results of the soil gas survey, indicating that contaminant concentrations were focused in the vicinity of the south end of the loading dock and the basement and declined significantly within about 50 feet to the west. These results confirmed our conclusions that Areas 1, 2, 3, 4, 5, 6, 7 and 8 were of greatest concern, and that areas to the west further into the facility should not be problematic. Samples collected at Areas 1 and 7 will be collected in large open areas of the building and should be representative of a significant area of the building to the west of the smaller rooms represented by Areas 2, 3, 4, 5, 6 and 8.

Sub-slab vapor samples will be collected from the two-inch soil or aggregate interval located immediately below the slab in the various areas of the building. Sub-slab vapor samples will not be collected in close proximity to cracks or drains in order to minimize potential ambient air infiltration. Temporary sub-slab vapor probe installations will be constructed by first drilling a one-inch diameter borehole through the concrete slab using an electric rotary hammer drill. Teflon™ tubing will then be inserted through the borehole, to a maximum of two inches into the sub-slab soil or aggregate. The annular space will then be backfilled with clean, coarse sand to within approximately 1-inch of the floor slab. The borehole will then be sealed to the surface elevation with non-VOC emitting modeling clay. This seal will ensure that the sub-slab vapor sample is not diluted with air from within the building. The end of the tubing located above grade will be connected to a 3-way valve assembly. One length of Teflon™ tubing coming off of the 3-way valve will be connected to a PID with a low-flow vacuum air pump, and the other

length of Teflon™ tubing will be connected to a laboratory cleaned and evacuated SUMMA canister. The SUMMA canister will be equipped with a laboratory provided flow regulator calibrated to allow sample collection over a 24-hour period of time.

The 3-way valve will be opened towards the PID vacuum pump, and the vacuum pump will be turned on to purge the tubing. PID readings will be monitored during this purging process. Approximately three volumes of the tubing will be purged. Following purging activities, the vacuum pump will be turned off, and the 3-way valve will be opened to allow airflow towards the SUMMA canister. The valve on the SUMMA canister will then be opened to allow for the sub-slab vapor sample collection. The pre-calibrated regulator on the SUMMA canister will restrict flow to allow sample collection over a 24-hour period.

Following sample collection, the valves on the SUMMA canisters will be tightly closed, and the sub-slab vapor samples will be submitted to a NYSDOH Environmental Laboratory Approved Program (ELAP) certified laboratory under chain-of-custody procedures for analysis. Sub-slab vapor samples will be analyzed for VOCs using United States Environmental Protection Agency (USEPA) Method TO-15. One field duplicate sample will be collected using a pre-cleaned, laboratory provided stainless steel "T" assembly. This stainless steel "T" assembly will allow two SUMMA canisters to collect samples from the same sub-slab installation.

Following the collection of sub-slab vapor samples, the sample tubing will be removed from both locations, and the borings will be backfilled with clean sand. The penetration through the concrete slab will be patched and sealed with a shallow topping of mortar so that it will easy to regain access to the hole in the future if necessary.

2.2.2 Indoor and Outdoor Air Samples

Both indoor and outdoor air samples will be collected concurrently with the sub-slab vapor samples. The up gradient outdoor ambient air sample is used to establish background regional air quality conditions. The indoor air samples will be collected from selected locations in close proximity to four of the sub-slab vapor sample collection locations, at a height approximately

three feet above the floor (the height at which occupants are normally seated). These sample locations are shown on Figure 2. The outdoor air sample will be collected from a representative, upwind location at a height of approximately four feet above the ground (a height representing the approximate breathing zone). The outdoor air sample location will be away from active motor vehicle areas, such as parking areas, driveways, etc as shown on Figure 1.

Both the indoor air and outdoor air samples will be collected using a pre-cleaned 6-liter SUMMA canister equipped with a laboratory provided regulator, calibrated to collect samples over a continuous 24-hour period. Both the indoor and outdoor air sample will be submitted for analysis for VOCs using USEPA Method TO-15.

During the sub-slab sampling, indoor, and outdoor air sampling activities, the following observations will be documented:

- Uses or presence of volatile chemicals during building maintenance will be identified;
- The use of heating or air conditioning systems during sampling will be noted;
- Floor plan sketches that include the floor layout with sample locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system air supply and return registers, compass orientation (north), and any other pertinent information should be noted;
- If possible, photographs will accompany floor plan sketches;
- Weather conditions (e.g., precipitation, indoor and outdoor temperature, and barometric pressure) and ventilation conditions (e.g., heating system active and windows closed) will be reported; and

Any pertinent observations, such as spills, floor stains, and odors will be recorded.

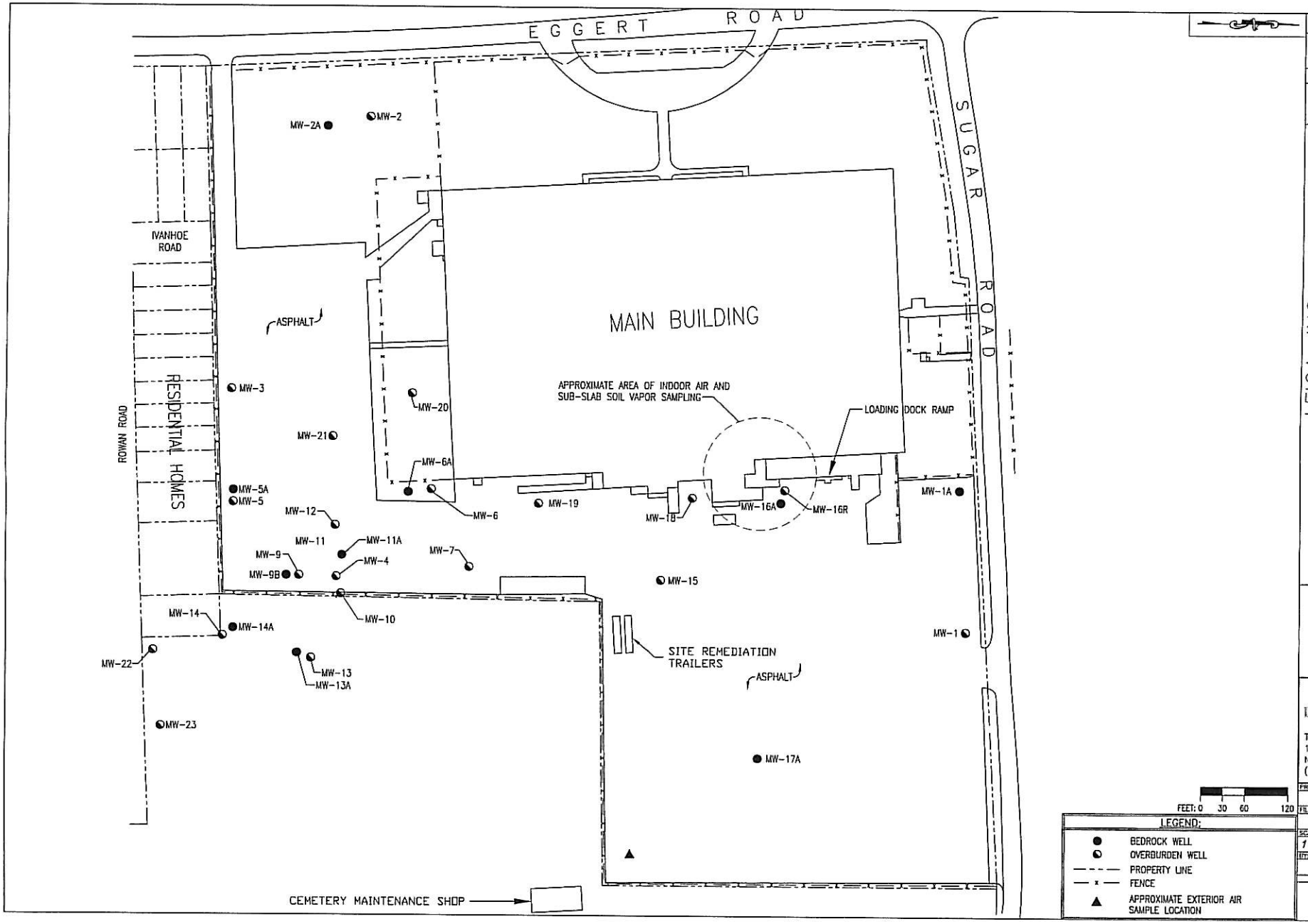
The field sampling team will maintain a sample log sheet summarizing the sample identification, date and time of sample collection, identity of samplers, sampling methods and devices utilized, vacuum of canisters before and after samples are collected, and sample analyses.

ENERGYSOLUTIONS

FIGURES

FIGURE 1 Site Location Map

FIGURE 2 Sample Location Map



DOCUMENT CONTROL NO.

REVISION NO.

LEICA, INC.
EGGERT & SUGAR ROADS
CHEEKTOWAGA, NEW YORK

SITE LOCATION MAP
OUTDOOR AIR SAMPLE LOCATION

PROJECT

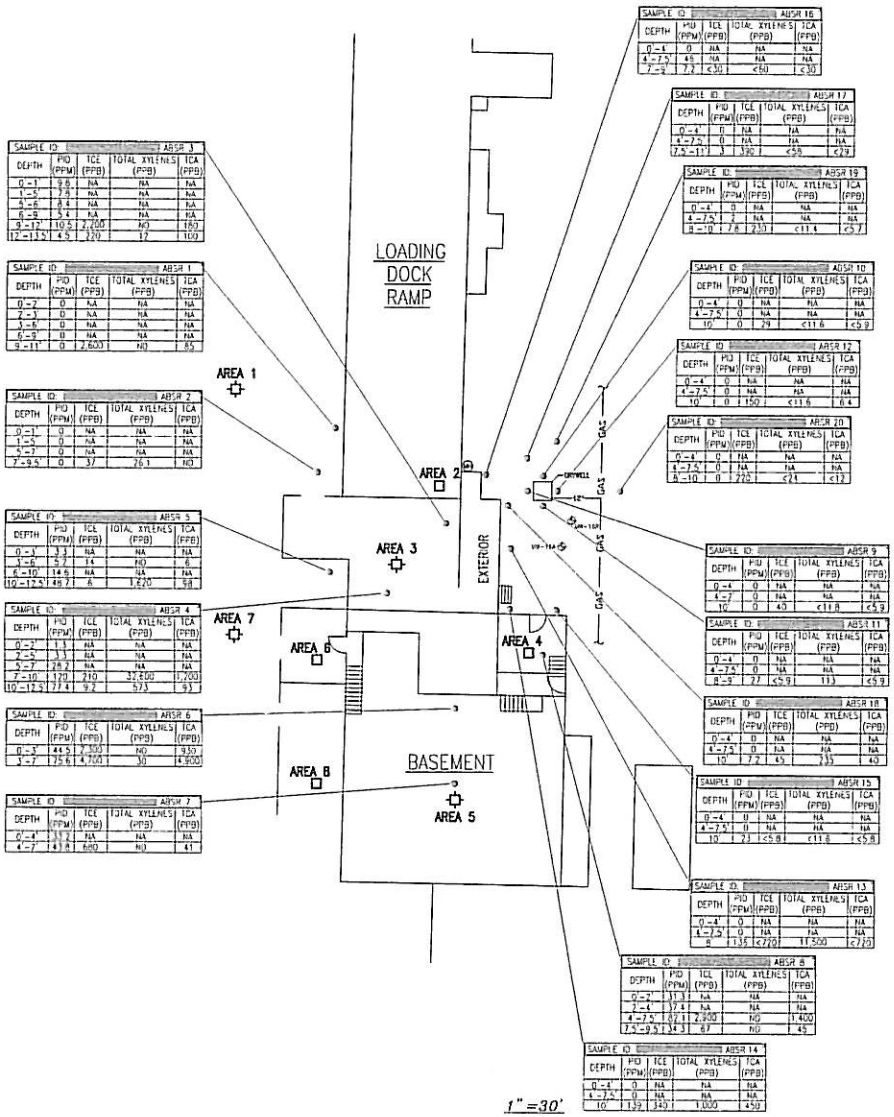
DRAWING

ENERGY SOLUTIONS
THE BLEACHERY
143 WEST STREET
NEW MILFORD, CT. 06776
(860) 210-3000

PROJECT NO:	
2528	
FILE NAME:	
2528-OASL-06	
SCALE:	DATE:
1" = 120'	08/24/06
BY:	CK:
MC	RM

FIGURE #

1



SAMPLE ID:		ABSR 3		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-1'	9.8	NA	NA	NA
1-5'	7.9	NA	NA	NA
5-6	8.4	NA	NA	NA
6-9	5.4	NA	NA	NA
9-12'	110.5	2,200	NO	180
12'-13.5'	4.5	220	12	100

SAMPLE ID:		ABSR 1		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-2'	0	NA	NA	NA
2-3	0	NA	NA	NA
3-6	0	NA	NA	NA
6-9	0	NA	NA	NA
9-11'	0	2,600	NO	85

SAMPLE ID:		ABSR 2		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-1'	0	NA	NA	NA
1-5	0	NA	NA	NA
5-7	0	NA	NA	NA
7-9.5	0	37	26.1	NO

SAMPLE ID:		ABSR 5		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-1'	3.3	NA	NA	NA
1-6	5.7	14	NO	6
6-10	14.5	NA	NA	NA
10-12.5'	49.7	6	1,620	98

SAMPLE ID:		ABSR 4		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-2'	1.3	NA	NA	NA
2-5	3.3	NA	NA	NA
5-7	28.2	NA	NA	NA
7-10	170	210	37,600	1,200
10'-12.5'	27.4	9.2	573	93

SAMPLE ID:		ABSR 6		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-5'	4.5	1,300	NO	930
5-7	15.6	4,700	30	4,900

SAMPLE ID		ABSR 7		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0'-4'	3.2	NA	NA	NA
4-7'	4.9	660	NO	41

SAMPLE ID:		ABSR 16		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4	0	NA	NA	NA
4-7.5'	45	NA	NA	NA
7-9	7.2	<30	<60	<30

SAMPLE ID:		ABSR 17		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4'	0	NA	NA	NA
4-7.5	0	NA	NA	NA
7.5'-11'	3	390	<58	<29

SAMPLE ID:		ABSR 19		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4'	0	NA	NA	NA
4-7.5'	1	NA	NA	NA
9-10	7.8	230	<11.6	<5.7

SAMPLE ID:		ABSR 10		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4'	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
10	0	79	<11.6	<5.9

SAMPLE ID:		ABSR 12		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
10	0	150	<11.6	6.4

SAMPLE ID:		ABSR 20		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4'	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
9-10	0	220	<24	<12

SAMPLE ID:		ABSR 9		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4	0	NA	NA	NA
4-7	0	NA	NA	NA
10	0	43	<11.8	<5.9

SAMPLE ID:		ABSR 11		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
8-9'	27	<5.9	133	<5.9

SAMPLE ID		ABSR 18		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4	0	NA	NA	NA
4-7.5	0	NA	NA	NA
10	7.2	45	233	40

SAMPLE ID		ABSR 15		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
10	23	<5.8	<11.8	<5.8

SAMPLE ID:		ABSR 13		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4'	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
8	135	<270	11,500	<270

SAMPLE ID:		ABSR 8		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-2'	31.3	NA	NA	NA
2-4'	37.4	NA	NA	NA
4-7.5'	87.1	2,900	NO	1,400
7.5-9.5'	34.3	67	NO	45

SAMPLE ID:		ABSR 14		
DEPTH	PID (PPM)	TCE (PPB)	TOTAL XYLENES (PPB)	TCA (PPB)
0-4'	0	NA	NA	NA
4-7.5'	0	NA	NA	NA
10	139	340	1,000	450

FEET: 0 7.5 15 30

LEGEND:

- SUB-SLAB SOIL GAS SAMPLING
- SUB-SLAB SOIL, GAS AND INDOOR SAMPLING
- MONITORING WELL
- SOIL SAMPLE LOCATIONS
- PROPERTY LINE
- FENCE

DOCUMENT CONTROL NO.

REVISION NO.

LEICA INC.
EGGERT & SUGAR ROADS
CHEEKTOWAGA, NEW YORK

SAMPLE LOCATION MAP
INDOOR AIR QUAITLY SAMPLING

PROJECT

DRAWING

ENERGYSOLUTIONS
THE BLEACHERY
143 WEST STREET
NEW MILFORD, CT. 06776
(860) 210-3000

PROJECT NO.: 2528

FILE NAME: 2528_IAQS

SCALE: SHOWN

DATE: 05/30/06

BY: MC

CK: RM

FIGURE # 2

ENERGYSOLUTIONS

ATTACHMENTS

ATTACHMENT 1 Indoor Air Quality Questionnaire And Building Inventory Form

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name _____ Date/Time Prepared _____

Preparer's Affiliation _____ Phone No._____

Purpose of Investigation_____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors_____ Building age_____

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other_____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	_____
1st Floor	_____
2nd Floor	_____
3rd Floor	_____
4th Floor	_____

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA Please specify_____

d. Has the building ever had a fire? Y / N When?_____

e. Is a kerosene or unvented gas space heater present? Y / N Where?_____

f. Is there a workshop or hobby/craft area? Y / N Where & Type? _____

g. Is there smoking in the building? Y / N How frequently? _____

h. Have cleaning products been used recently? Y / N When & Type? _____

i. Have cosmetic products been used recently? Y / N When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / N Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / N Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes, where vented? _____

n. Is there a bathroom exhaust fan? Y / N If yes, where vented? _____

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	Public Water	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	Public Sewer	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

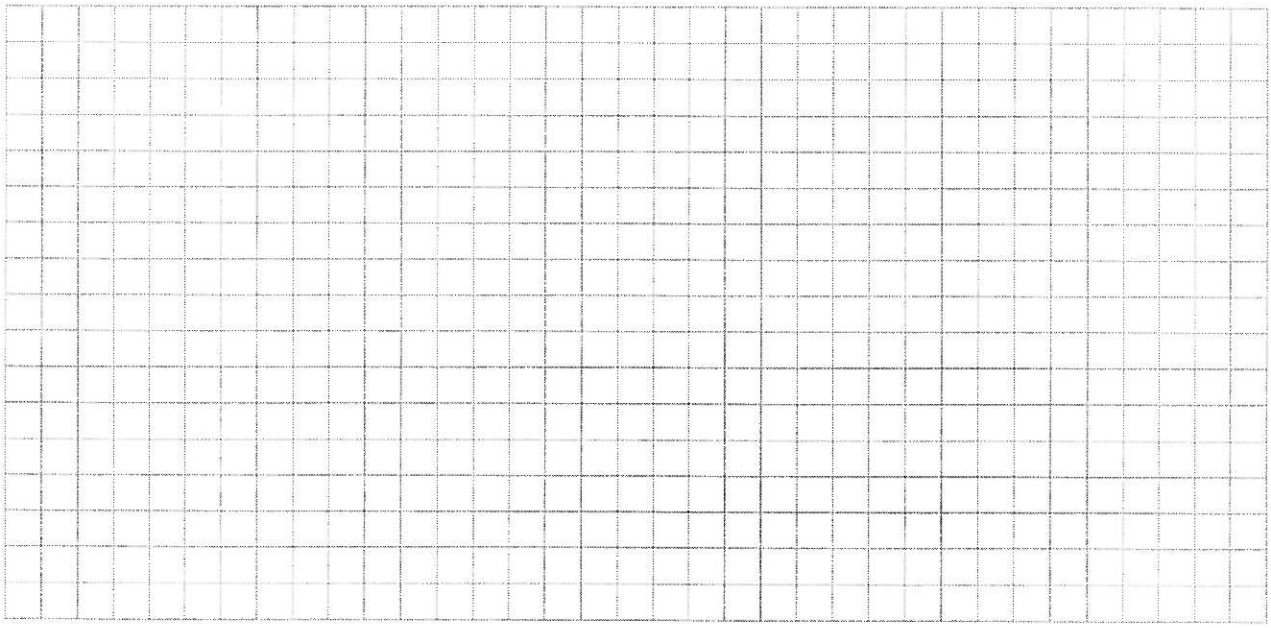
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

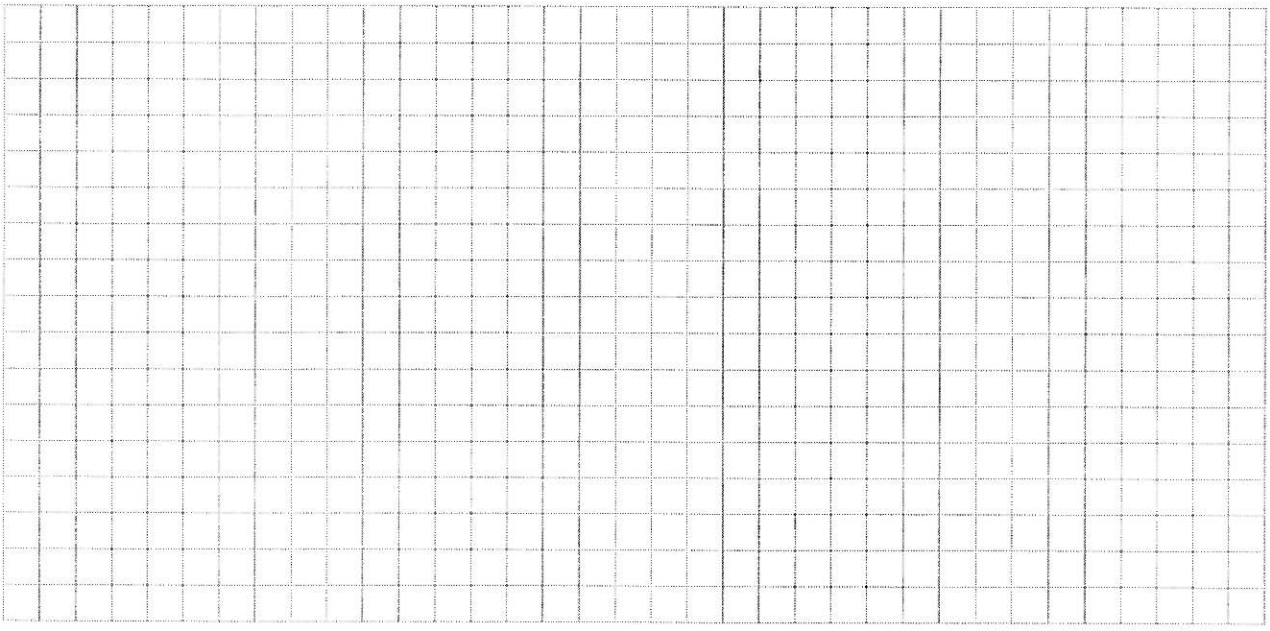
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



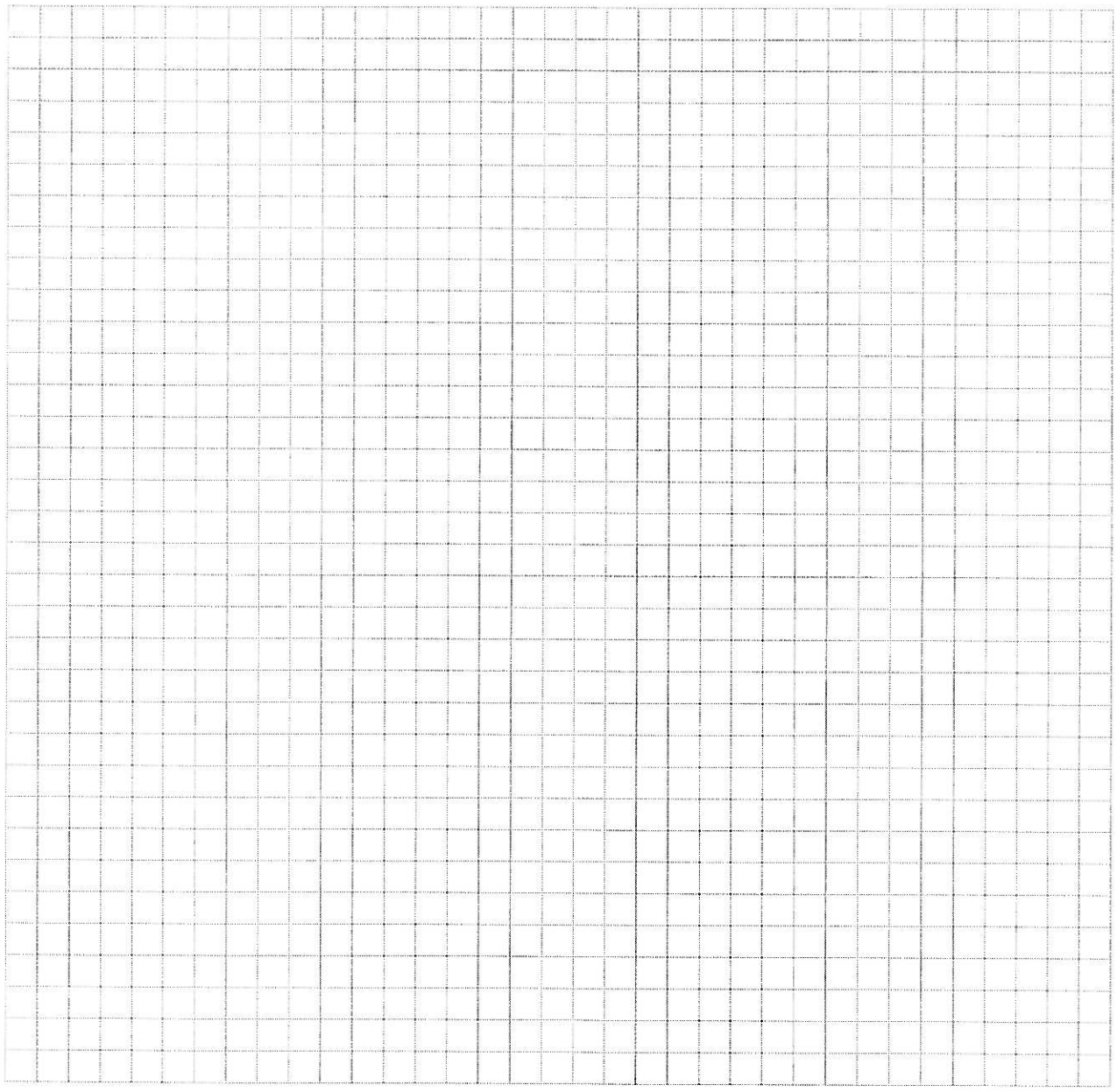
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX B

LABORATORY DATA

Columbia Analytical Services™ 1 Mustard Street, Suite 250 | Rochester, NY 14609 | 585-288-5380 | 585-288-8475 fax | www.caslab.com

April 14, 2010 Service Request No: R1001548

Mr. Robert McPeak
Energy Solutions, Inc.
100 Mill Plain Rd
2nd Floor Mailbox 106
Danbury, CT 06811

Laboratory Results for: Leica Airs

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on March 24, 2010. For your reference, these analyses have been assigned our service request number **R1001548**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at KBunker@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Karen Bunker
Project Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Energy Solutions	**Service Request No.:**	R1001548
Project:	Leica	**Date Received:**	3/24/10
Sample Matrix:	Air		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

Sample Receipt

Eleven (11) air samples were collected in 6 Liter canisters by the client on 3/23/10 and were received on the same day at Columbia Analytical Services via the CAS Courier.

Volatile Organic Compounds by EPA Method 8260B

Ten (10) air samples and one (1) Trip Blank were analyzed for a client specified List of Volatile Organics by Method TO-15. All data is reported in ug/m3 and ppbv units.

The initial and continuing calibrations criteria were met for all samples.

All BFB Tune requirements were met for the method.

Surrogate standard recoveries were within acceptance limits.

Hits between the Method Reporting Limit (MRL) and Minimum Detection Limit (MDL) are flagged as "J", estimated.

Hits above the calibration range of the standards are flagged as "E", estimated. The sample is then repeated at the appropriate dilution for the hit. Both sets of data are included in the report. The subsequent hits on the diluted sample are flagged as "D".

Laboratory Method Blank contained low level contamination for various compounds. Affected samples are flagged as "B" for these compounds.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries were acceptable.

All samples were analyzed within the 28 day holding time from collection to analysis.

No other analytical or QC problems were encountered.

Approved by Karen Burhow **Date** 4/16/10

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1001548

Lab ID	Client ID
R1001548-001	SB-1
R1001548-002	IA-1
R1001548-003	SB-2
R1001548-004	IA-2
R1001548-005	SB-3
R1001548-007	SB-4
R1001548-008	IA-4
R1001548-009	DUP
R1001548-010	QA
R1001548-011	TRIP
R1001548-012	IA-3

Columbia Analytical Services

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1130
Date Received: 3/24/10

Sample Name: SB-1
Lab Code: R1001548-001

Analytical Method: TO-15

Date Analyzed: 4/7/10 1053
Canister Dilution Factor: 1.36

Initial Pressure (psig): -1.3 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	0.300	2000	2000	59	990	990	29	U
75-01-4	Vinyl Chloride	0.300	270	270	39	110	110	15	U
74-83-9	Bromomethane	0.300	1900	1900	110	500	500	27	U
75-00-3	Chloroethane	0.300	2600	2600	140	1000	1000	51	U
67-64-1	Acetone	0.300	23000	23000	850	9500	9500	360	U
75-69-4	Trichlorofluoromethane (CFC 11)	0.300	2800	2800	140	500	500	26	U
75-35-4	**1,1-Dichloroethene**	0.300	**2000**	2000	72	**520**	500	18	
75-09-2	**Methylene Chloride**	0.300	**110**	1700	95	**31**	500	27	J
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.300	770	770	100	100	100	13	U
75-15-0	Carbon Disulfide	0.300	1500	1500	32	500	500	10	U
156-60-5	**trans-1,2-Dichloroethene**	0.300	**1300**	2000	71	**330**	500	18	J
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	0.300	**25000**	2000	91	**6100**	500	22	
1634-04-4	Methyl tert-Butyl Ether	0.300	3600	3600	28	990	990	7.8	U
108-05-4	Vinyl Acetate	0.300	23000	23000	42	6400	6400	12	U
78-93-3	**2-Butanone (MEK)**	0.300	**62**	2900	60	**21**	1000	20	J
156-59-2	**cis-1,2-Dichloroethene**	0.300	**8800**	2000	120	**2200**	500	31	
67-66-3	**Chloroform**	0.300	**180**	2400	100	**36**	500	21	J
107-06-2	1,2-Dichloroethane	0.300	2000	2000	84	500	500	21	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	0.300	**91000**	2700	83	**17000**	500	15	
71-43-2	**Benzene**	0.300	**78**	1600	51	**24**	500	16	J
56-23-5	Carbon Tetrachloride	0.300	320	320	110	50	50	18	U
78-87-5	1,2-Dichloropropane	0.300	2300	2300	120	500	500	26	U
75-27-4	Bromodichloromethane	0.300	680	680	130	100	100	19	U
79-01-6	**Trichloroethene (TCE)**	0.300	**190000**	270	96	**35000**	51	18	
10061-01-5	cis-1,3-Dichloropropene	0.300	4500	4500	63	1000	1000	14	U
108-10-1	4-Methyl-2-pentanone	0.300	4100	4100	76	1000	1000	18	U
10061-02-6	trans-1,3-Dichloropropene	0.300	2300	2300	97	500	500	21	U
79-00-5	1,1,2-Trichloroethane	0.300	2700	2700	160	500	500	30	U
108-88-3	**Toluene**	0.300	**1600**	1900	43	**430**	490	11	J
591-78-6	2-Hexanone	0.300	2000	2000	91	500	500	22	U
124-48-1	Dibromochloromethane	0.300	860	860	190	100	100	22	U
106-93-4	1,2-Dibromoethane	0.300	770	770	140	100	100	18	U
127-18-4	**Tetrachloroethene (PCE)**	0.300	**740**	360	140	**110**	54	21	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1130
Date Received: 3/24/10

Sample Name: SB-1
Lab Code: R1001548-001

Analytical Method: TO-15

Date Analyzed: 4/7/10 1053
Canister Dilution Factor: 1.36

Initial Pressure (psig): -1.3 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	0.300	2300	2300	110	500	500	23	U
100-41-4	Ethylbenzene	0.300	4300	4300	42	990	990	9.6	U
179601-23-1	m,p-Xylenes	0.300	8700	8700	83	2000	2000	19	U
75-25-2	Bromoform	0.300	5200	5200	130	500	500	13	U
100-42-5	Styrene	0.300	4300	4300	39	1000	1000	9.3	U
95-47-6	o-Xylene	0.300	4300	4300	54	990	990	12	U
79-34-5	1,1,2,2-Tetrachloroethane	0.300	680	680	130	99	99	18	U
541-73-1	1,3-Dichlorobenzene	0.300	6000	6000	99	1000	1000	17	U
106-46-7	1,4-Dichlorobenzene	0.300	6000	6000	120	1000	1000	21	U
95-50-1	1,2-Dichlorobenzene	0.300	6000	6000	140	1000	1000	23	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	4/7/10 1053	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1135
Date Received: 3/24/10

Sample Name: IA-1
Lab Code: R1001548-002

Analytical Method: TO-15

Date Analyzed: 4/5/10 1642
Canister Dilution Factor: 1.54

Initial Pressure (psig): -2.9 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	**Chloromethane**	1000	**1.2**	0.69	0.020	**0.58**	0.34	0.0097	
75-01-4	Vinyl Chloride	1000	0.092	0.092	0.013	0.036	0.036	0.0052	U
74-83-9	**Bromomethane**	1000	**0.060**	0.66	0.036	**0.015**	0.17	0.0092	J
75-00-3	Chloroethane	1000	0.89	0.89	0.046	0.34	0.34	0.017	U
67-64-1	**Acetone**	1000	**9.3**	7.7	0.29	**3.9**	3.2	0.12	
75-69-4	**Trichlorofluoromethane (CFC 11)**	1000	**1.5**	0.95	0.049	**0.27**	0.17	0.0087	
75-35-4	**1,1-Dichloroethene**	1000	**0.20**	0.68	0.024	**0.049**	0.17	0.0061	J
75-09-2	**Methylene Chloride**	1000	**0.38**	0.59	0.032	**0.11**	0.17	0.0093	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	1000	**0.67**	0.26	0.034	**0.087**	0.034	0.0045	
75-15-0	**Carbon Disulfide**	1000	**0.029**	0.52	0.011	**0.0094**	0.17	0.0035	BJ
156-60-5	**trans-1,2-Dichloroethene**	1000	**0.19**	0.68	0.024	**0.048**	0.17	0.0061	J
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	1000	**2.1**	0.69	0.031	**0.52**	0.17	0.0076	
1634-04-4	Methyl tert-Butyl Ether	1000	1.2	1.2	0.0095	0.34	0.34	0.0026	U
108-05-4	Vinyl Acetate	1000	7.7	7.7	0.014	2.2	2.2	0.0041	U
78-93-3	**2-Butanone (MEK)**	1000	**1.0**	1.0	0.020	**0.35**	0.34	0.0069	
156-59-2	**cis-1,2-Dichloroethene**	1000	**0.69**	0.68	0.041	**0.18**	0.17	0.010	
67-66-3	**Chloroform**	1000	**0.10**	0.83	0.035	**0.021**	0.17	0.0072	J
107-06-2	**1,2-Dichloroethane**	1000	**0.11**	0.69	0.028	**0.028**	0.17	0.0070	J
71-55-6	**1,1,1-Trichloroethane (TCA)**	1000	**8.2**	0.92	0.028	**1.5**	0.17	0.0052	
71-43-2	**Benzene**	1000	**0.85**	0.54	0.017	**0.27**	0.17	0.0054	
56-23-5	**Carbon Tetrachloride**	1000	**0.57**	0.11	0.039	**0.091**	0.017	0.0061	
78-87-5	1,2-Dichloropropane	1000	0.79	0.79	0.041	0.17	0.17	0.0088	U
75-27-4	Bromodichloromethane	1000	0.23	0.23	0.044	0.034	0.034	0.0066	U
79-01-6	**Trichloroethene (TCE)**	1000	**17**	0.092	0.033	**3.2**	0.017	0.0061	
10061-01-5	cis-1,3-Dichloropropene	1000	1.5	1.5	0.022	0.34	0.34	0.0048	U
108-10-1	**4-Methyl-2-pentanone**	1000	**0.077**	1.4	0.026	**0.019**	0.34	0.0063	J
10061-02-6	trans-1,3-Dichloropropene	1000	0.77	0.77	0.033	0.17	0.17	0.0072	U
79-00-5	1,1,2-Trichloroethane	1000	0.92	0.92	0.056	0.17	0.17	0.010	U
108-88-3	**Toluene**	1000	**1.7**	0.63	0.014	**0.46**	0.17	0.0038	
591-78-6	**2-Hexanone**	1000	**0.085**	0.69	0.031	**0.021**	0.17	0.0076	J
124-48-1	Dibromochloromethane	1000	0.29	0.29	0.065	0.034	0.034	0.0076	U
106-93-4	1,2-Dibromoethane	1000	0.26	0.26	0.047	0.034	0.034	0.0062	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**0.18**	0.12	0.048	**0.026**	0.018	0.0070	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1135
Date Received: 3/24/10

Sample Name: IA-1
Lab Code: R1001548-002

Analytical Method: TO-15

Date Analyzed: 4/5/10 1642
Canister Dilution Factor: 1.54

Initial Pressure (psig): -2.9 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.79	0.79	0.036	0.17	0.17	0.0079	U
100-41-4	**Ethylbenzene**	1000	**0.40**	1.5	0.014	**0.092**	0.34	0.0033	J
179601-23-1	**m,p-Xylenes**	1000	**0.65**	2.9	0.028	**0.15**	0.68	0.0065	J
75-25-2	Bromoform	1000	1.8	1.8	0.045	0.17	0.17	0.0043	U
100-42-5	**Styrene**	1000	**0.22**	1.4	0.013	**0.052**	0.34	0.0031	J
95-47-6	**o-Xylene**	1000	**0.21**	1.5	0.018	**0.049**	0.34	0.0042	J
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.23	0.23	0.043	0.034	0.034	0.0062	U
541-73-1	1,3-Dichlorobenzene	1000	2.0	2.0	0.034	0.34	0.34	0.0056	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.047**	2.0	0.042	**0.0079**	0.34	0.0070	BJ
95-50-1	1,2-Dichlorobenzene	1000	2.0	2.0	0.048	0.34	0.34	0.0079	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	4/5/10 1642	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1140
Date Received: 3/24/10

Sample Name: SB-2
Lab Code: R1001548-003

Analytical Method: TO-15

Date Analyzed: 4/7/10 1140
Canister Dilution Factor: 1.46

Initial Pressure (psig): -2.2 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	6.3	100	100	3.0	51	51	1.5	U
75-01-4	Vinyl Chloride	6.3	14	14	2.0	5.4	5.4	0.78	U
74-83-9	Bromomethane	6.3	100	100	5.4	26	26	1.4	U
75-00-3	Chloroethane	6.3	130	130	6.9	51	51	2.6	U
67-64-1	**Acetone**	6.3	**120**	1200	43	**51**	490	18	J
75-69-4	Trichlorofluoromethane (CFC 11)	6.3	140	140	7.3	26	26	1.3	U
75-35-4	1,1-Dichloroethene	6.3	100	100	3.7	26	26	0.92	U
75-09-2	**Methylene Chloride**	6.3	**5.9**	88	4.8	**1.7**	25	1.4	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	6.3	**120**	39	5.2	**15**	5.1	0.68	
75-15-0	Carbon Disulfide	6.3	79	79	1.6	25	25	0.53	U
156-60-5	**trans-1,2-Dichloroethene**	6.3	**76**	100	3.6	**19**	26	0.92	J
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	6.3	**1000**	100	4.6	**250**	26	1.1	
1634-04-4	Methyl tert-Butyl Ether	6.3	180	180	1.4	51	51	0.40	U
108-05-4	Vinyl Acetate	6.3	1200	1200	2.2	330	330	0.61	U
78-93-3	**2-Butanone (MEK)**	6.3	**21**	150	3.1	**7.1**	51	1.0	J
156-59-2	**cis-1,2-Dichloroethene**	6.3	**130**	100	6.2	**33**	26	1.6	
67-66-3	**Chloroform**	6.3	**20**	130	5.3	**4.1**	26	1.1	J
107-06-2	1,2-Dichloroethane	6.3	100	100	4.3	26	26	1.1	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	6.3	**1900**	140	4.3	**350**	25	0.78	
71-43-2	**Benzene**	6.3	**5.4**	81	2.6	**1.7**	25	0.81	J
56-23-5	Carbon Tetrachloride	6.3	16	16	5.8	2.6	2.6	0.92	U
78-87-5	1,2-Dichloropropane	6.3	120	120	6.1	26	26	1.3	U
75-27-4	Bromodichloromethane	6.3	35	35	6.6	5.2	5.2	0.99	U
79-01-6	**Trichloroethene (TCE)**	6.3	**12000**	14	4.9	**2200**	2.6	0.91	
10061-01-5	cis-1,3-Dichloropropene	6.3	230	230	3.2	51	51	0.71	U
108-10-1	4-Methyl-2-pentanone	6.3	210	210	3.9	51	51	0.94	U
10061-02-6	trans-1,3-Dichloropropene	6.3	120	120	4.9	26	26	1.1	U
79-00-5	1,1,2-Trichloroethane	6.3	140	140	8.4	25	25	1.5	U
108-88-3	**Toluene**	6.3	**1900**	95	2.2	**510**	25	0.58	
591-78-6	2-Hexanone	6.3	100	100	4.7	25	25	1.1	U
124-48-1	Dibromochloromethane	6.3	44	44	9.8	5.2	5.2	1.1	U
106-93-4	1,2-Dibromoethane	6.3	39	39	7.1	5.1	5.1	0.93	U
127-18-4	**Tetrachloroethene (PCE)**	6.3	**190**	19	7.2	**28**	2.7	1.1	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	3/23/10 1140
Sample Matrix:	Air	**Date Received:**	3/24/10
Sample Name:	SB-2		
Lab Code:	R1001548-003		

Analytical Method: TO-15 **Date Analyzed:** 4/7/10 1140

Canister Dilution Factor: 1.46

Initial Pressure (psig): -2.2 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	6.3	120	120	5.5	26	26	1.2	U
100-41-4	**Ethylbenzene**	6.3	**8.2**	220	2.1	**1.9**	51	0.49	J
179601-23-1	**m,p-Xylenes**	6.3	**22**	440	4.3	**5.0**	100	0.98	J
75-25-2	Bromoform	6.3	260	260	6.7	26	26	0.65	U
100-42-5	Styrene	6.3	220	220	2.0	51	51	0.47	U
95-47-6	**o-Xylene**	6.3	**7.9**	220	2.8	**1.8**	51	0.64	J
79-34-5	1,1,2,2-Tetrachloroethane	6.3	35	35	6.4	5.1	5.1	0.94	U
541-73-1	1,3-Dichlorobenzene	6.3	310	310	5.1	51	51	0.84	U
106-46-7	1,4-Dichlorobenzene	6.3	310	310	6.3	51	51	1.1	U
95-50-1	1,2-Dichlorobenzene	6.3	310	310	7.2	51	51	1.2	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	4/7/10 1140	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1142
Date Received: 3/24/10

Sample Name: IA-2
Lab Code: R1001548-004

Analytical Method: TO-15

Date Analyzed: 4/5/10 1732
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	**Chloromethane**	1000	**1.2**	0.64	0.018	**0.56**	0.31	0.0089	
75-01-4	Vinyl Chloride	1000	0.085	0.085	0.012	0.033	0.033	0.0048	U
74-83-9	Bromomethane	1000	0.61	0.61	0.033	0.16	0.16	0.0085	U
75-00-3	Chloroethane	1000	0.82	0.82	0.042	0.31	0.31	0.016	U
67-64-1	**Acetone**	1000	**12**	7.1	0.27	**5.2**	3.0	0.11	
75-69-4	**Trichlorofluoromethane (CFC 11)**	1000	**1.5**	0.88	0.045	**0.26**	0.16	0.0080	
75-35-4	1,1-Dichloroethene	1000	0.62	0.62	0.022	0.16	0.16	0.0057	U
75-09-2	**Methylene Chloride**	1000	**0.50**	0.54	0.030	**0.14**	0.16	0.0085	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	1000	**0.80**	0.24	0.032	**0.10**	0.032	0.0042	
75-15-0	**Carbon Disulfide**	1000	**0.038**	0.48	0.010	**0.012**	0.16	0.0032	BJ
156-60-5	**trans-1,2-Dichloroethene**	1000	**0.033**	0.62	0.022	**0.0084**	0.16	0.0056	J
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	1000	**0.074**	0.64	0.028	**0.018**	0.16	0.0070	J
1634-04-4	Methyl tert-Butyl Ether	1000	1.1	1.1	0.0088	0.31	0.31	0.0024	U
108-05-4	**Vinyl Acetate**	1000	**0.056**	7.1	0.013	**0.016**	2.0	0.0038	J
78-93-3	**2-Butanone (MEK)**	1000	**1.4**	0.92	0.019	**0.46**	0.31	0.0064	
156-59-2	**cis-1,2-Dichloroethene**	1000	**0.19**	0.62	0.038	**0.049**	0.16	0.0096	J
67-66-3	**Chloroform**	1000	**0.094**	0.77	0.032	**0.019**	0.16	0.0066	J
107-06-2	**1,2-Dichloroethane**	1000	**0.13**	0.64	0.026	**0.032**	0.16	0.0065	J
71-55-6	**1,1,1-Trichloroethane (TCA)**	1000	**0.22**	0.85	0.026	**0.040**	0.16	0.0048	J
71-43-2	**Benzene**	1000	**1.3**	0.50	0.016	**0.42**	0.16	0.0050	
56-23-5	**Carbon Tetrachloride**	1000	**0.57**	0.099	0.036	**0.090**	0.016	0.0056	
78-87-5	1,2-Dichloropropane	1000	0.72	0.72	0.037	0.16	0.16	0.0081	U
75-27-4	Bromodichloromethane	1000	0.21	0.21	0.041	0.032	0.032	0.0061	U
79-01-6	**Trichloroethene (TCE)**	1000	**4.4**	0.085	0.030	**0.83**	0.016	0.0056	
10061-01-5	cis-1,3-Dichloropropene	1000	1.4	1.4	0.020	0.31	0.31	0.0044	U
108-10-1	**4-Methyl-2-pentanone**	1000	**0.067**	1.3	0.024	**0.016**	0.31	0.0058	J
10061-02-6	trans-1,3-Dichloropropene	1000	0.71	0.71	0.030	0.16	0.16	0.0067	U
79-00-5	1,1,2-Trichloroethane	1000	0.85	0.85	0.051	0.16	0.16	0.0094	U
108-88-3	**Toluene**	1000	**3.9**	0.58	0.013	**1.0**	0.15	0.0035	
591-78-6	**2-Hexanone**	1000	**0.089**	0.64	0.029	**0.022**	0.16	0.0070	J
124-48-1	Dibromochloromethane	1000	0.27	0.27	0.060	0.032	0.032	0.0070	U
106-93-4	1,2-Dibromoethane	1000	0.24	0.24	0.044	0.031	0.031	0.0057	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**0.27**	0.11	0.044	**0.039**	0.017	0.0065	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1142
Date Received: 3/24/10

Sample Name: IA-2
Lab Code: R1001548-004

Analytical Method: TO-15

Date Analyzed: 4/5/10 1732
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.72	0.72	0.034	0.16	0.16	0.0073	U
100-41-4	**Ethylbenzene**	1000	**0.97**	1.3	0.013	**0.22**	0.31	0.0030	J
179601-23-1	**m,p-Xylenes**	1000	**1.7**	2.7	0.026	**0.38**	0.62	0.0060	J
75-25-2	Bromoform	1000	1.6	1.6	0.041	0.16	0.16	0.0040	U
100-42-5	**Styrene**	1000	**0.52**	1.3	0.012	**0.12**	0.31	0.0029	J
95-47-6	**o-Xylene**	1000	**0.55**	1.3	0.017	**0.13**	0.31	0.0039	J
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.21	0.21	0.039	0.031	0.031	0.0058	U
541-73-1	1,3-Dichlorobenzene	1000	1.9	1.9	0.031	0.31	0.31	0.0052	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.045**	1.9	0.039	**0.0075**	0.31	0.0065	BJ
95-50-1	1,2-Dichlorobenzene	1000	1.9	1.9	0.044	0.31	0.31	0.0073	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	70-130	4/5/10 1732	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1200
Date Received: 3/24/10

Sample Name: SB-3
Lab Code: R1001548-005

Analytical Method: TO-15

Date Analyzed: 4/7/10 1226
Canister Dilution Factor: 1.49

Initial Pressure (psig): -2.5 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	7.8	86	86	2.5	42	42	1.2	U
75-01-4	Vinyl Chloride	7.8	11	11	1.6	4.5	4.5	0.64	U
74-83-9	Bromomethane	7.8	82	82	4.4	21	21	1.1	U
75-00-3	Chloroethane	7.8	110	110	5.7	42	42	2.2	U
67-64-1	**Acetone**	7.8	**150**	960	36	**63**	400	15	J
75-69-4	Trichlorofluoromethane (CFC 11)	7.8	120	120	6.0	21	21	1.1	U
75-35-4	1,1-Dichloroethene	7.8	84	84	3.0	21	21	0.76	U
75-09-2	**Methylene Chloride**	7.8	**5.7**	73	4.0	**1.6**	21	1.1	J
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.8	32	32	4.3	4.2	4.2	0.56	U
75-15-0	**Carbon Disulfide**	7.8	**2.9**	65	1.4	**0.95**	21	0.44	J
156-60-5	**trans-1,2-Dichloroethene**	7.8	**30**	84	3.0	**7.5**	21	0.76	J
75-34-3	1,1-Dichloroethane (1,1-DCA)	7.8	86	86	3.8	21	21	0.94	U
1634-04-4	Methyl tert-Butyl Ether	7.8	150	150	1.2	42	42	0.33	U
108-05-4	Vinyl Acetate	7.8	960	960	1.8	270	270	0.50	U
78-93-3	**2-Butanone (MEK)**	7.8	**22**	120	2.5	**7.6**	42	0.86	J
156-59-2	**cis-1,2-Dichloroethene**	7.8	**43**	84	5.1	**11**	21	1.3	J
67-66-3	Chloroform	7.8	100	100	4.4	21	21	0.89	U
107-06-2	1,2-Dichloroethane	7.8	86	86	3.5	21	21	0.87	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	7.8	**14**	110	3.5	**2.5**	21	0.64	J
71-43-2	**Benzene**	7.8	**2.9**	67	2.1	**0.91**	21	0.67	J
56-23-5	Carbon Tetrachloride	7.8	13	13	4.8	2.1	2.1	0.76	U
78-87-5	1,2-Dichloropropane	7.8	97	97	5.0	21	21	1.1	U
75-27-4	Bromodichloromethane	7.8	29	29	5.5	4.3	4.3	0.82	U
79-01-6	**Trichloroethene (TCE)**	7.8	**220**	11	4.0	**42**	2.1	0.75	
10061-01-5	cis-1,3-Dichloropropene	7.8	190	190	2.7	42	42	0.59	U
108-10-1	4-Methyl-2-pentanone	7.8	170	170	3.2	42	42	0.78	U
10061-02-6	trans-1,3-Dichloropropene	7.8	96	96	4.1	21	21	0.90	U
79-00-5	1,1,2-Trichloroethane	7.8	110	110	6.9	21	21	1.3	U
108-88-3	**Toluene**	7.8	**8900**	78	1.8	**2400**	21	0.48	E
591-78-6	2-Hexanone	7.8	86	86	3.8	21	21	0.94	U
124-48-1	Dibromochloromethane	7.8	36	36	8.0	4.3	4.3	0.94	U
106-93-4	1,2-Dibromoethane	7.8	32	32	5.9	4.2	4.2	0.77	U
127-18-4	**Tetrachloroethene (PCE)**	7.8	**36**	15	5.9	**5.2**	2.3	0.87	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1200
Date Received: 3/24/10

Sample Name: SB-3
Lab Code: R1001548-005

Analytical Method: TO-15

Date Analyzed: 4/7/10 1226
Canister Dilution Factor: 1.49

Initial Pressure (psig): -2.5 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	7.8	97	97	4.5	21	21	0.98	U
100-41-4	**Ethylbenzene**	7.8	**28**	180	1.8	**6.4**	42	0.40	J
179601-23-1	**m,p-Xylenes**	7.8	**99**	360	3.5	**23**	84	0.81	J
75-25-2	Bromoform	7.8	220	220	5.5	21	21	0.54	U
100-42-5	Styrene	7.8	180	180	1.7	42	42	0.39	U
95-47-6	**o-Xylene**	7.8	**30**	180	2.3	**6.9**	42	0.52	J
79-34-5	1,1,2,2-Tetrachloroethane	7.8	29	29	5.3	4.2	4.2	0.77	U
541-73-1	1,3-Dichlorobenzene	7.8	250	250	4.2	42	42	0.70	U
106-46-7	1,4-Dichlorobenzene	7.8	250	250	5.2	42	42	0.87	U
95-50-1	1,2-Dichlorobenzene	7.8	250	250	5.9	42	42	0.99	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	4/7/10 1226	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1200
Date Received: 3/24/10

Sample Name: SB-3
Lab Code: R1001548-005
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 4/7/10 1313
Canister Dilution Factor: 1.49

Initial Pressure (psig): -2.5 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	4.0	170	170	4.8	81	81	2.3	U
75-01-4	Vinyl Chloride	4.0	22	22	3.2	8.7	8.7	1.3	U
74-83-9	Bromomethane	4.0	160	160	8.6	41	41	2.2	U
75-00-3	Chloroethane	4.0	220	220	11	82	82	4.2	U
67-64-1	**Acetone**	4.0	**140**	1900	70	**59**	780	29	DJ
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	230	230	12	41	41	2.1	U
75-35-4	1,1-Dichloroethene	4.0	160	160	5.9	41	41	1.5	U
75-09-2	**Methylene Chloride**	4.0	**9.1**	140	7.8	**2.6**	41	2.2	DJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	63	63	8.3	8.3	8.3	1.1	U
75-15-0	**Carbon Disulfide**	4.0	**3.8**	130	2.6	**1.2**	41	0.85	DJ
156-60-5	**trans-1,2-Dichloroethene**	4.0	**30**	160	5.8	**7.6**	41	1.5	DJ
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	4.0	**14**	170	7.5	**3.4**	41	1.8	DJ
1634-04-4	Methyl tert-Butyl Ether	4.0	290	290	2.3	82	82	0.64	U
108-05-4	Vinyl Acetate	4.0	1900	1900	3.5	530	530	0.98	U
78-93-3	**2-Butanone (MEK)**	4.0	**22**	240	5.0	**7.3**	82	1.7	DJ
156-59-2	**cis-1,2-Dichloroethene**	4.0	**44**	160	10	**11**	41	2.5	DJ
67-66-3	Chloroform	4.0	200	200	8.5	41	41	1.7	U
107-06-2	1,2-Dichloroethane	4.0	170	170	6.9	41	41	1.7	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	4.0	**42**	220	6.9	**7.7**	41	1.3	DJ
71-43-2	Benzene	4.0	130	130	4.2	41	41	1.3	U
56-23-5	Carbon Tetrachloride	4.0	26	26	9.3	4.1	4.1	1.5	U
78-87-5	1,2-Dichloropropane	4.0	190	190	9.8	41	41	2.1	U
75-27-4	Bromodichloromethane	4.0	56	56	11	8.3	8.3	1.6	U
79-01-6	**Trichloroethene (TCE)**	4.0	**260**	22	7.9	**49**	4.2	1.5	D
10061-01-5	cis-1,3-Dichloropropene	4.0	370	370	5.2	82	82	1.1	U
108-10-1	4-Methyl-2-pentanone	4.0	340	340	6.2	82	82	1.5	U
10061-02-6	trans-1,3-Dichloropropene	4.0	190	190	7.9	41	41	1.7	U
79-00-5	1,1,2-Trichloroethane	4.0	220	220	13	41	41	2.5	U
108-88-3	**Toluene**	4.0	**7300**	150	3.5	**1900**	41	0.93	D
591-78-6	2-Hexanone	4.0	170	170	7.5	41	41	1.8	U
124-48-1	Dibromochloromethane	4.0	71	71	16	8.3	8.3	1.8	U
106-93-4	1,2-Dibromoethane	4.0	63	63	11	8.2	8.2	1.5	U
127-18-4	**Tetrachloroethene (PCE)**	4.0	**31**	30	12	**4.6**	4.4	1.7	D

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1200
Date Received: 3/24/10

Sample Name: SB-3
Lab Code: R1001548-005
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 4/7/10 1313
Canister Dilution Factor: 1.49

Initial Pressure (psig): -2.5 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	4.0	190	190	8.8	41	41	1.9	U
100-41-4	**Ethylbenzene**	4.0	**18**	350	3.4	**4.2**	82	0.79	DJ
179601-23-1	**m,p-Xylenes**	4.0	**61**	710	6.9	**14**	160	1.6	DJ
75-25-2	Bromoform	4.0	420	420	11	41	41	1.0	U
100-42-5	Styrene	4.0	350	350	3.2	82	82	0.76	U
95-47-6	**o-Xylene**	4.0	**19**	350	4.4	**4.3**	82	1.0	DJ
79-34-5	1,1,2,2-Tetrachloroethane	4.0	56	56	10	8.1	8.1	1.5	U
541-73-1	1,3-Dichlorobenzene	4.0	490	490	8.2	82	82	1.4	U
106-46-7	1,4-Dichlorobenzene	4.0	490	490	10	82	82	1.7	U
95-50-1	1,2-Dichlorobenzene	4.0	490	490	12	82	82	1.9	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	4/7/10 1313	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1230
Date Received: 3/24/10

Sample Name: SB-4
Lab Code: R1001548-007

Analytical Method: TO-15

Date Analyzed: 4/7/10 1401
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.7 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	3.9	160	160	4.7	78	78	2.3	U
75-01-4	Vinyl Chloride	3.9	22	22	3.1	8.4	8.4	1.2	U
74-83-9	Bromomethane	3.9	150	150	8.3	40	40	2.1	U
75-00-3	Chloroethane	3.9	210	210	11	79	79	4.1	U
67-64-1	Acetone	3.9	1800	1800	67	760	760	28	U
75-69-4	Trichlorofluoromethane (CFC 11)	3.9	220	220	11	40	40	2.0	U
75-35-4	**1,1-Dichloroethene**	3.9	**520**	160	5.7	**130**	40	1.4	
75-09-2	**Methylene Chloride**	3.9	**9.2**	140	7.5	**2.7**	39	2.2	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	3.9	**27**	61	8.0	**3.5**	8.0	1.0	J
75-15-0	Carbon Disulfide	3.9	120	120	2.5	39	39	0.82	U
156-60-5	**trans-1,2-Dichloroethene**	3.9	**320**	160	5.6	**81**	40	1.4	
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	3.9	**3900**	160	7.2	**950**	40	1.8	
1634-04-4	Methyl tert-Butyl Ether	3.9	280	280	2.2	79	79	0.62	U
108-05-4	Vinyl Acetate	3.9	1800	1800	3.3	510	510	0.95	U
78-93-3	2-Butanone (MEK)	3.9	230	230	4.8	79	79	1.6	U
156-59-2	**cis-1,2-Dichloroethene**	3.9	**460**	160	9.7	**120**	40	2.4	
67-66-3	**Chloroform**	3.9	**20**	190	8.2	**4.1**	40	1.7	J
107-06-2	1,2-Dichloroethane	3.9	160	160	6.6	40	40	1.6	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	3.9	**5100**	220	6.6	**940**	39	1.2	
71-43-2	Benzene	3.9	130	130	4.0	39	39	1.3	U
56-23-5	Carbon Tetrachloride	3.9	25	25	9.0	4.0	4.0	1.4	U
78-87-5	1,2-Dichloropropane	3.9	180	180	9.5	40	40	2.1	U
75-27-4	Bromodichloromethane	3.9	54	54	10	8.0	8.0	1.5	U
79-01-6	**Trichloroethene (TCE)**	3.9	**25000**	22	7.6	**4600**	4.0	1.4	E
10061-01-5	cis-1,3-Dichloropropene	3.9	360	360	5.0	79	79	1.1	U
108-10-1	4-Methyl-2-pentanone	3.9	320	320	6.0	79	79	1.5	U
10061-02-6	trans-1,3-Dichloropropene	3.9	180	180	7.6	40	40	1.7	U
79-00-5	1,1,2-Trichloroethane	3.9	220	220	13	39	39	2.4	U
108-88-3	**Toluene**	3.9	**3600**	150	3.4	**950**	39	0.90	
591-78-6	2-Hexanone	3.9	160	160	7.2	39	39	1.8	U
124-48-1	Dibromochloromethane	3.9	68	68	15	8.0	8.0	1.8	U
106-93-4	1,2-Dibromoethane	3.9	61	61	11	7.9	7.9	1.4	U
127-18-4	**Tetrachloroethene (PCE)**	3.9	**340**	29	11	**49**	4.2	1.6	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1230
Date Received: 3/24/10

Sample Name: SB-4
Lab Code: R1001548-007

Analytical Method: TO-15

Date Analyzed: 4/7/10 1401
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.7 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	3.9	180	180	8.5	40	40	1.8	U
100-41-4	**Ethylbenzene**	3.9	**10**	340	3.3	**2.4**	79	0.76	J
179601-23-1	**m,p-Xylenes**	3.9	**32**	690	6.6	**7.3**	160	1.5	J
75-25-2	Bromoform	3.9	410	410	10	40	40	1.0	U
100-42-5	Styrene	3.9	340	340	3.1	79	79	0.73	U
95-47-6	**o-Xylene**	3.9	**12**	340	4.3	**2.8**	79	0.98	J
79-34-5	1,1,2,2-Tetrachloroethane	3.9	54	54	10	7.8	7.8	1.5	U
541-73-1	1,3-Dichlorobenzene	3.9	470	470	7.9	79	79	1.3	U
106-46-7	1,4-Dichlorobenzene	3.9	470	470	9.8	79	79	1.6	U
95-50-1	1,2-Dichlorobenzene	3.9	470	470	11	79	79	1.9	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	4/7/10 1401	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1230
Date Received: 3/24/10

Sample Name: SB-4
Lab Code: R1001548-007
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 4/7/10 1448
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.7 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	2.0	320	320	9.1	150	150	4.4	U
75-01-4	Vinyl Chloride	2.0	42	42	6.0	16	16	2.4	U
74-83-9	Bromomethane	2.0	300	300	16	78	78	4.2	U
75-00-3	Chloroethane	2.0	410	410	21	150	150	7.9	U
67-64-1	Acetone	2.0	3500	3500	130	1500	1500	55	U
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	430	430	22	77	77	3.9	U
75-35-4	**1,1-Dichloroethene**	2.0	**440**	310	11	**110**	78	2.8	D
75-09-2	Methylene Chloride	2.0	270	270	15	77	77	4.2	U
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	2.0	**23**	120	16	**3.0**	16	2.0	DJ
75-15-0	Carbon Disulfide	2.0	240	240	5.0	76	76	1.6	U
156-60-5	**trans-1,2-Dichloroethene**	2.0	**280**	310	11	**70**	78	2.8	DJ
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	2.0	**3600**	320	14	**880**	78	3.5	D
1634-04-4	Methyl tert-Butyl Ether	2.0	550	550	4.3	150	150	1.2	U
108-05-4	Vinyl Acetate	2.0	3500	3500	6.5	990	990	1.8	U
78-93-3	2-Butanone (MEK)	2.0	460	460	9.3	150	150	3.2	U
156-59-2	**cis-1,2-Dichloroethene**	2.0	**390**	310	19	**100**	78	4.8	D
67-66-3	**Chloroform**	2.0	**18**	380	16	**3.7**	77	3.3	DJ
107-06-2	1,2-Dichloroethane	2.0	320	320	13	78	78	3.2	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	2.0	**4400**	420	13	**810**	77	2.4	D
71-43-2	Benzene	2.0	250	250	7.8	77	77	2.5	U
56-23-5	Carbon Tetrachloride	2.0	49	49	18	7.8	7.8	2.8	U
78-87-5	1,2-Dichloropropane	2.0	360	360	18	77	77	4.0	U
75-27-4	Bromodichloromethane	2.0	110	110	20	16	16	3.0	U
79-01-6	**Trichloroethene (TCE)**	2.0	**22000**	42	15	**4200**	7.8	2.8	D
10061-01-5	cis-1,3-Dichloropropene	2.0	700	700	9.8	150	150	2.2	U
108-10-1	4-Methyl-2-pentanone	2.0	630	630	12	150	150	2.9	U
10061-02-6	trans-1,3-Dichloropropene	2.0	350	350	15	77	77	3.3	U
79-00-5	1,1,2-Trichloroethane	2.0	420	420	25	77	77	4.6	U
108-88-3	**Toluene**	2.0	**3100**	290	6.6	**830**	76	1.7	D
591-78-6	2-Hexanone	2.0	320	320	14	77	77	3.4	U
124-48-1	Dibromochloromethane	2.0	130	130	29	16	16	3.5	U
106-93-4	1,2-Dibromoethane	2.0	120	120	22	15	15	2.8	U
127-18-4	**Tetrachloroethene (PCE)**	2.0	**290**	56	22	**42**	8.3	3.2	D

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	3/23/10 1230
Sample Matrix:	Air	**Date Received:**	3/24/10
Sample Name:	SB-4		
Lab Code:	R1001548-007		
Run Type:	Dilution		
Analytical Method:	TO-15	**Date Analyzed:**	4/7/10 1448
		Canister Dilution Factor:	1.40

Initial Pressure (psig): -1.7 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	2.0	360	360	17	78	78	3.6	U
100-41-4	Ethylbenzene	2.0	670	670	6.4	150	150	1.5	U
179601-23-1	**m,p-Xylenes**	2.0	**29**	1300	13	**6.7**	310	3.0	DJ
75-25-2	Bromoform	2.0	800	800	20	77	77	2.0	U
100-42-5	Styrene	2.0	660	660	6.1	150	150	1.4	U
95-47-6	**o-Xylene**	2.0	**12**	670	8.3	**2.7**	150	1.9	DJ
79-34-5	1,1,2,2-Tetrachloroethane	2.0	110	110	19	15	15	2.8	U
541-73-1	1,3-Dichlorobenzene	2.0	920	920	15	150	150	2.6	U
106-46-7	1,4-Dichlorobenzene	2.0	920	920	19	150	150	3.2	U
95-50-1	1,2-Dichlorobenzene	2.0	920	920	22	150	150	3.6	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	4/7/10 1448	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1230
Date Received: 3/24/10

Sample Name: IA-4
Lab Code: R1001548-008

Analytical Method: TO-15

Date Analyzed: 4/6/10 1817
Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	**Chloromethane**	1000	**1.3**	0.65	0.019	**0.62**	0.31	0.0091	
75-01-4	Vinyl Chloride	1000	0.086	0.086	0.012	0.034	0.034	0.0048	U
74-83-9	Bromomethane	1000	0.62	0.62	0.033	0.16	0.16	0.0086	U
75-00-3	Chloroethane	1000	0.84	0.84	0.043	0.32	0.32	0.016	U
67-64-1	**Acetone**	1000	**4.0**	7.2	0.27	**1.7**	3.0	0.11	J
75-69-4	**Trichlorofluoromethane (CFC 11)**	1000	**2.6**	0.89	0.046	**0.47**	0.16	0.0081	
75-35-4	1,1-Dichloroethene	1000	0.63	0.63	0.023	0.16	0.16	0.0057	U
75-09-2	**Methylene Chloride**	1000	**0.43**	0.55	0.030	**0.12**	0.16	0.0087	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	1000	**0.70**	0.24	0.032	**0.091**	0.032	0.0042	
75-15-0	**Carbon Disulfide**	1000	**0.025**	0.49	0.010	**0.0082**	0.16	0.0033	J
156-60-5	trans-1,2-Dichloroethene	1000	0.63	0.63	0.023	0.16	0.16	0.0057	U
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	1000	**0.18**	0.65	0.029	**0.043**	0.16	0.0071	J
1634-04-4	Methyl tert-Butyl Ether	1000	1.1	1.1	0.0089	0.32	0.32	0.0025	U
108-05-4	Vinyl Acetate	1000	7.2	7.2	0.013	2.0	2.0	0.0038	U
78-93-3	**2-Butanone (MEK)**	1000	**0.80**	0.94	0.019	**0.27**	0.32	0.0065	J
156-59-2	**cis-1,2-Dichloroethene**	1000	**0.11**	0.63	0.039	**0.027**	0.16	0.0098	J
67-66-3	**Chloroform**	1000	**0.12**	0.78	0.033	**0.025**	0.16	0.0067	J
107-06-2	**1,2-Dichloroethane**	1000	**0.10**	0.65	0.027	**0.025**	0.16	0.0066	J
71-55-6	**1,1,1-Trichloroethane (TCA)**	1000	**0.19**	0.86	0.026	**0.035**	0.16	0.0049	J
71-43-2	**Benzene**	1000	**0.67**	0.50	0.016	**0.21**	0.16	0.0051	
56-23-5	**Carbon Tetrachloride**	1000	**0.71**	0.10	0.036	**0.11**	0.016	0.0057	
78-87-5	**1,2-Dichloropropane**	1000	**0.043**	0.73	0.038	**0.0094**	0.16	0.0082	J
75-27-4	Bromodichloromethane	1000	0.22	0.22	0.041	0.032	0.032	0.0061	U
79-01-6	**Trichloroethene (TCE)**	1000	**0.35**	0.086	0.031	**0.066**	0.016	0.0057	
10061-01-5	cis-1,3-Dichloropropene	1000	1.4	1.4	0.020	0.32	0.32	0.0044	U
108-10-1	4-Methyl-2-pentanone	1000	1.3	1.3	0.024	0.32	0.32	0.0059	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.72	0.72	0.031	0.16	0.16	0.0068	U
79-00-5	1,1,2-Trichloroethane	1000	0.86	0.86	0.052	0.16	0.16	0.0096	U
108-88-3	**Toluene**	1000	**0.63**	0.59	0.014	**0.17**	0.16	0.0036	
591-78-6	**2-Hexanone**	1000	**0.061**	0.65	0.029	**0.015**	0.16	0.0071	J
124-48-1	Dibromochloromethane	1000	0.27	0.27	0.061	0.032	0.032	0.0071	U
106-93-4	1,2-Dibromoethane	1000	0.24	0.24	0.044	0.032	0.032	0.0058	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**0.076**	0.12	0.045	**0.011**	0.017	0.0066	J

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	3/23/10 1230
Sample Matrix:	Air	**Date Received:**	3/24/10
Sample Name:	IA-4		
Lab Code:	R1001548-008		

Analytical Method: TO-15 **Date Analyzed:** 4/6/10 1817

Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.73	0.73	0.034	0.16	0.16	0.0074	U
100-41-4	**Ethylbenzene**	1000	**0.12**	1.4	0.013	**0.027**	0.32	0.0031	J
179601-23-1	**m,p-Xylenes**	1000	**0.33**	2.8	0.026	**0.076**	0.63	0.0061	J
75-25-2	Bromoform	1000	1.6	1.6	0.042	0.16	0.16	0.0040	U
100-42-5	Styrene	1000	1.4	1.4	0.013	0.32	0.32	0.0029	U
95-47-6	**o-Xylene**	1000	**0.10**	1.4	0.017	**0.024**	0.32	0.0039	J
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.22	0.22	0.040	0.031	0.031	0.0058	U
541-73-1	1,3-Dichlorobenzene	1000	1.9	1.9	0.032	0.32	0.32	0.0052	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.054**	1.9	0.039	**0.0091**	0.32	0.0065	BJ
95-50-1	1,2-Dichlorobenzene	1000	1.9	1.9	0.045	0.32	0.32	0.0074	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	91	70-130	4/6/10 1817	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1225
Date Received: 3/24/10

Sample Name: DUP
Lab Code: R1001548-009

Analytical Method: TO-15

Date Analyzed: 4/7/10 1536
Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.8 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	4.5	140	140	4.1	68	68	2.0	U
75-01-4	Vinyl Chloride	4.5	19	19	2.7	7.4	7.4	1.1	U
74-83-9	Bromomethane	4.5	130	130	7.3	35	35	1.9	U
75-00-3	Chloroethane	4.5	180	180	9.4	69	69	3.6	U
67-64-1	**Acetone**	4.5	**160**	1600	59	**68**	660	25	J
75-69-4	Trichlorofluoromethane (CFC 11)	4.5	190	190	9.9	35	35	1.8	U
75-35-4	1,1-Dichloroethene	4.5	140	140	5.0	35	35	1.2	U
75-09-2	**Methylene Chloride**	4.5	**7.9**	120	6.5	**2.3**	34	1.9	J
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.5	53	53	7.0	7.0	7.0	0.92	U
75-15-0	Carbon Disulfide	4.5	110	110	2.2	34	34	0.71	U
156-60-5	**trans-1,2-Dichloroethene**	4.5	**25**	140	4.9	**6.3**	35	1.2	J
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.5	140	140	6.3	35	35	1.5	U
1634-04-4	Methyl tert-Butyl Ether	4.5	250	250	1.9	69	69	0.54	U
108-05-4	Vinyl Acetate	4.5	1600	1600	2.9	450	450	0.83	U
78-93-3	**2-Butanone (MEK)**	4.5	**35**	200	4.2	**12**	69	1.4	J
156-59-2	**cis-1,2-Dichloroethene**	4.5	**33**	140	8.4	**8.3**	35	2.1	J
67-66-3	Chloroform	4.5	170	170	7.1	35	35	1.5	U
107-06-2	1,2-Dichloroethane	4.5	140	140	5.8	35	35	1.4	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	4.5	**13**	190	5.8	**2.5**	34	1.1	J
71-43-2	Benzene	4.5	110	110	3.5	34	34	1.1	U
56-23-5	Carbon Tetrachloride	4.5	22	22	7.8	3.5	3.5	1.2	U
78-87-5	1,2-Dichloropropane	4.5	160	160	8.3	35	35	1.8	U
75-27-4	Bromodichloromethane	4.5	47	47	9.0	7.0	7.0	1.3	U
79-01-6	**Trichloroethene (TCE)**	4.5	**190**	19	6.6	**36**	3.5	1.2	
10061-01-5	cis-1,3-Dichloropropene	4.5	310	310	4.4	69	69	0.97	U
108-10-1	4-Methyl-2-pentanone	4.5	280	280	5.2	69	69	1.3	U
10061-02-6	trans-1,3-Dichloropropene	4.5	160	160	6.7	35	35	1.5	U
79-00-5	1,1,2-Trichloroethane	4.5	190	190	11	34	34	2.1	U
108-88-3	**Toluene**	4.5	**8000**	130	2.9	**2100**	34	0.78	
591-78-6	2-Hexanone	4.5	140	140	6.3	34	34	1.5	U
124-48-1	Dibromochloromethane	4.5	60	60	13	7.0	7.0	1.5	U
106-93-4	1,2-Dibromoethane	4.5	53	53	9.7	6.9	6.9	1.3	U
127-18-4	**Tetrachloroethene (PCE)**	4.5	**29**	25	9.7	**4.3**	3.7	1.4	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	3/23/10 1225
Sample Matrix:	Air	**Date Received:**	3/24/10
Sample Name:	DUP		
Lab Code:	R1001548-009		

Analytical Method: TO-15 **Date Analyzed:** 4/7/10 1536

Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.8 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	4.5	160	160	7.4	35	35	1.6	U
100-41-4	**Ethylbenzene**	4.5	**19**	300	2.9	**4.3**	69	0.66	J
179601-23-1	**m,p-Xylenes**	4.5	**64**	600	5.8	**15**	140	1.3	J
75-25-2	Bromoform	4.5	360	360	9.1	35	35	0.88	U
100-42-5	Styrene	4.5	290	290	2.7	69	69	0.64	U
95-47-6	**o-Xylene**	4.5	**21**	300	3.7	**4.7**	69	0.86	J
79-34-5	1,1,2,2-Tetrachloroethane	4.5	47	47	8.7	6.8	6.8	1.3	U
541-73-1	1,3-Dichlorobenzene	4.5	410	410	6.9	69	69	1.1	U
106-46-7	1,4-Dichlorobenzene	4.5	410	410	8.6	69	69	1.4	U
95-50-1	1,2-Dichlorobenzene	4.5	410	410	9.7	69	69	1.6	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	4/7/10 1536	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1245
Date Received: 3/24/10

Sample Name: QA
Lab Code: R1001548-010

Analytical Method: TO-15

Date Analyzed: 4/6/10 1908
Canister Dilution Factor: 1.39

Initial Pressure (psig): -1.6 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	**Chloromethane**	1000	**1.2**	0.63	0.018	**0.59**	0.30	0.0088	
75-01-4	Vinyl Chloride	1000	0.083	0.083	0.012	0.033	0.033	0.0047	U
74-83-9	**Bromomethane**	1000	**0.039**	0.60	0.032	**0.010**	0.15	0.0083	J
75-00-3	Chloroethane	1000	0.81	0.81	0.042	0.31	0.31	0.016	U
67-64-1	**Acetone**	1000	**3.3**	7.0	0.26	**1.4**	2.9	0.11	J
75-69-4	**Trichlorofluoromethane (CFC 11)**	1000	**1.4**	0.86	0.044	**0.26**	0.15	0.0078	
75-35-4	1,1-Dichloroethene	1000	0.61	0.61	0.022	0.15	0.15	0.0055	U
75-09-2	**Methylene Chloride**	1000	**0.27**	0.53	0.029	**0.078**	0.15	0.0084	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	1000	**0.65**	0.24	0.031	**0.085**	0.031	0.0041	
75-15-0	**Carbon Disulfide**	1000	**0.017**	0.47	0.0099	**0.0054**	0.15	0.0032	J
156-60-5	trans-1,2-Dichloroethene	1000	0.61	0.61	0.022	0.15	0.15	0.0055	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.63	0.63	0.028	0.15	0.15	0.0069	U
1634-04-4	Methyl tert-Butyl Ether	1000	1.1	1.1	0.0086	0.30	0.30	0.0024	U
108-05-4	Vinyl Acetate	1000	7.0	7.0	0.013	2.0	2.0	0.0037	U
78-93-3	**2-Butanone (MEK)**	1000	**0.54**	0.90	0.018	**0.18**	0.31	0.0063	J
156-59-2	cis-1,2-Dichloroethene	1000	0.61	0.61	0.037	0.15	0.15	0.0094	U
67-66-3	**Chloroform**	1000	**0.079**	0.75	0.032	**0.016**	0.15	0.0065	J
107-06-2	**1,2-Dichloroethane**	1000	**0.088**	0.63	0.026	**0.022**	0.15	0.0064	J
71-55-6	**1,1,1-Trichloroethane (TCA)**	1000	**0.061**	0.83	0.026	**0.011**	0.15	0.0047	J
71-43-2	**Benzene**	1000	**0.51**	0.49	0.016	**0.16**	0.15	0.0049	
56-23-5	**Carbon Tetrachloride**	1000	**0.63**	0.097	0.035	**0.10**	0.015	0.0055	
78-87-5	1,2-Dichloropropane	1000	0.71	0.71	0.037	0.15	0.15	0.0079	U
75-27-4	Bromodichloromethane	1000	0.21	0.21	0.040	0.031	0.031	0.0059	U
79-01-6	**Trichloroethene (TCE)**	1000	**0.031**	0.083	0.029	**0.0058**	0.016	0.0055	J
10061-01-5	cis-1,3-Dichloropropene	1000	1.4	1.4	0.019	0.31	0.31	0.0043	U
108-10-1	4-Methyl-2-pentanone	1000	1.3	1.3	0.023	0.31	0.31	0.0057	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.70	0.70	0.030	0.15	0.15	0.0065	U
79-00-5	1,1,2-Trichloroethane	1000	0.83	0.83	0.050	0.15	0.15	0.0092	U
108-88-3	**Toluene**	1000	**0.41**	0.57	0.013	**0.11**	0.15	0.0035	J
591-78-6	2-Hexanone	1000	0.63	0.63	0.028	0.15	0.15	0.0068	U
124-48-1	Dibromochloromethane	1000	0.26	0.26	0.059	0.031	0.031	0.0069	U
106-93-4	1,2-Dibromoethane	1000	0.24	0.24	0.043	0.031	0.031	0.0056	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**0.070**	0.11	0.043	**0.010**	0.016	0.0064	J

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1245
Date Received: 3/24/10

Sample Name: QA
Lab Code: R1001548-010

Analytical Method: TO-15

Date Analyzed: 4/6/10 1908
Canister Dilution Factor: 1.39

Initial Pressure (psig): -1.6 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.71	0.71	0.033	0.15	0.15	0.0071	U
100-41-4	**Ethylbenzene**	1000	**0.062**	1.3	0.013	**0.014**	0.30	0.0029	J
179601-23-1	**m,p-Xylenes**	1000	**0.17**	2.7	0.026	**0.039**	0.61	0.0059	J
75-25-2	Bromoform	1000	1.6	1.6	0.040	0.15	0.15	0.0039	U
100-42-5	Styrene	1000	1.3	1.3	0.012	0.31	0.31	0.0028	U
95-47-6	**o-Xylene**	1000	**0.059**	1.3	0.017	**0.014**	0.30	0.0038	J
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.21	0.21	0.039	0.030	0.030	0.0056	U
541-73-1	1,3-Dichlorobenzene	1000	1.8	1.8	0.030	0.31	0.31	0.0051	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.039**	1.8	0.038	**0.0064**	0.31	0.0063	BJ
95-50-1	1,2-Dichlorobenzene	1000	1.8	1.8	0.043	0.31	0.31	0.0072	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	4/6/10 1908	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10
Date Received: 3/24/10

Sample Name: TRIP
Lab Code: R1001548-011

Analytical Method: TO-15

Date Analyzed: 4/5/10 1551
Canister Dilution Factor: 1.00

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.013	0.22	0.22	0.0063	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.0086	0.023	0.023	0.0034	U
74-83-9	Bromomethane	1000	0.43	0.43	0.023	0.11	0.11	0.0060	U
75-00-3	Chloroethane	1000	0.58	0.58	0.030	0.22	0.22	0.011	U
67-64-1	**Acetone**	1000	**0.43**	5.0	0.19	**0.18**	2.1	0.079	BJ
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.032	0.11	0.11	0.0056	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-09-2	**Methylene Chloride**	1000	**0.028**	0.38	0.021	**0.0081**	0.11	0.0060	BJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	0.17	0.17	0.022	0.022	0.022	0.0029	U
75-15-0	Carbon Disulfide	1000	0.34	0.34	0.0071	0.11	0.11	0.0023	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.020	0.11	0.11	0.0049	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.0062	0.22	0.22	0.0017	U
108-05-4	Vinyl Acetate	1000	5.0	5.0	0.0093	1.4	1.4	0.0026	U
78-93-3	**2-Butanone (MEK)**	1000	**0.088**	0.65	0.013	**0.030**	0.22	0.0045	BJ
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.027	0.11	0.11	0.0068	U
67-66-3	Chloroform	1000	0.54	0.54	0.023	0.11	0.11	0.0047	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.019	0.11	0.11	0.0046	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.018	0.11	0.11	0.0034	U
71-43-2	**Benzene**	1000	**0.013**	0.35	0.011	**0.0041**	0.11	0.0035	BJ
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.025	0.011	0.011	0.0040	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.026	0.11	0.11	0.0057	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.029	0.022	0.022	0.0043	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.021	0.011	0.011	0.0039	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.014	0.22	0.22	0.0031	U
108-10-1	4-Methyl-2-pentanone	1000	0.90	0.90	0.017	0.22	0.22	0.0041	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.021	0.11	0.11	0.0047	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.036	0.11	0.11	0.0066	U
108-88-3	Toluene	1000	0.41	0.41	0.0094	0.11	0.11	0.0025	U
591-78-6	**2-Hexanone**	1000	**0.026**	0.45	0.020	**0.0064**	0.11	0.0049	J
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.042	0.022	0.022	0.0049	U
106-93-4	1,2-Dibromoethane	1000	0.17	0.17	0.031	0.022	0.022	0.0040	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.031	0.012	0.012	0.0046	U

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10
Date Received: 3/24/10

Sample Name: TRIP
Lab Code: R1001548-011

Analytical Method: TO-15

Date Analyzed: 4/5/10 1551
Canister Dilution Factor: 1.00

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.51	0.51	0.024	0.11	0.11	0.0051	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.0092	0.22	0.22	0.0021	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.018	0.44	0.44	0.0042	U
75-25-2	Bromoform	1000	1.1	1.1	0.029	0.11	0.11	0.0028	U
100-42-5	Styrene	1000	0.94	0.94	0.0087	0.22	0.22	0.0020	U
95-47-6	o-Xylene	1000	0.95	0.95	0.012	0.22	0.22	0.0027	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.028	0.022	0.022	0.0040	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.022	0.22	0.22	0.0036	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.027	0.22	0.22	0.0045	U
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.031	0.22	0.22	0.0052	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	4/5/10 1551	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1200
Date Received: 3/24/10

Sample Name: IA-3
Lab Code: R1001548-012

Analytical Method: TO-15

Date Analyzed: 4/6/10 2000
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.5 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	**Chloromethane**	1000	**1.1**	0.62	0.018	**0.53**	0.30	0.0087	
75-01-4	Vinyl Chloride	1000	0.083	0.083	0.012	0.032	0.032	0.0046	U
74-83-9	**Bromomethane**	1000	**0.056**	0.59	0.032	**0.014**	0.15	0.0082	J
75-00-3	Chloroethane	1000	0.80	0.80	0.041	0.30	0.30	0.016	U
67-64-1	**Acetone**	1000	**11**	6.9	0.26	**4.6**	2.9	0.11	
75-69-4	**Trichlorofluoromethane (CFC 11)**	1000	**1.6**	0.86	0.044	**0.28**	0.15	0.0078	
75-35-4	**1,1-Dichloroethene**	1000	**0.030**	0.61	0.022	**0.0076**	0.15	0.0055	J
75-09-2	**Methylene Chloride**	1000	**0.41**	0.52	0.029	**0.12**	0.15	0.0083	J
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	1000	**0.72**	0.23	0.031	**0.094**	0.031	0.0040	
75-15-0	**Carbon Disulfide**	1000	**0.041**	0.47	0.0098	**0.013**	0.15	0.0031	J
156-60-5	**trans-1,2-Dichloroethene**	1000	**0.094**	0.61	0.022	**0.024**	0.15	0.0055	J
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	1000	**0.17**	0.62	0.028	**0.043**	0.15	0.0068	J
1634-04-4	Methyl tert-Butyl Ether	1000	1.1	1.1	0.0086	0.30	0.30	0.0024	U
108-05-4	**Vinyl Acetate**	1000	**0.24**	6.9	0.013	**0.068**	2.0	0.0036	J
78-93-3	**2-Butanone (MEK)**	1000	**4.4**	0.90	0.018	**1.5**	0.30	0.0062	
156-59-2	**cis-1,2-Dichloroethene**	1000	**0.35**	0.61	0.037	**0.088**	0.15	0.0094	J
67-66-3	**Chloroform**	1000	**0.099**	0.75	0.031	**0.020**	0.15	0.0064	J
107-06-2	**1,2-Dichloroethane**	1000	**0.20**	0.62	0.026	**0.050**	0.15	0.0063	J
71-55-6	**1,1,1-Trichloroethane (TCA)**	1000	**0.57**	0.83	0.025	**0.10**	0.15	0.0047	J
71-43-2	**Benzene**	1000	**2.0**	0.48	0.015	**0.61**	0.15	0.0048	
56-23-5	**Carbon Tetrachloride**	1000	**0.62**	0.097	0.035	**0.098**	0.015	0.0055	
78-87-5	1,2-Dichloropropane	1000	0.70	0.70	0.036	0.15	0.15	0.0079	U
75-27-4	Bromodichloromethane	1000	0.21	0.21	0.039	0.031	0.031	0.0059	U
79-01-6	**Trichloroethene (TCE)**	1000	**9.0**	0.083	0.029	**1.7**	0.015	0.0054	
10061-01-5	cis-1,3-Dichloropropene	1000	1.4	1.4	0.019	0.30	0.30	0.0043	U
108-10-1	**4-Methyl-2-pentanone**	1000	**0.11**	1.2	0.023	**0.028**	0.30	0.0056	J
10061-02-6	trans-1,3-Dichloropropene	1000	0.69	0.69	0.029	0.15	0.15	0.0065	U
79-00-5	1,1,2-Trichloroethane	1000	0.83	0.83	0.050	0.15	0.15	0.0092	U
108-88-3	**Toluene**	1000	**9.0**	0.57	0.013	**2.4**	0.15	0.0034	
591-78-6	**2-Hexanone**	1000	**0.077**	0.62	0.028	**0.019**	0.15	0.0068	J
124-48-1	Dibromochloromethane	1000	0.26	0.26	0.058	0.031	0.031	0.0068	U
106-93-4	1,2-Dibromoethane	1000	0.23	0.23	0.043	0.031	0.031	0.0055	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**0.14**	0.11	0.043	**0.021**	0.016	0.0063	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: 3/23/10 1200
Date Received: 3/24/10

Sample Name: IA-3
Lab Code: R1001548-012

Analytical Method: TO-15

Date Analyzed: 4/6/10 2000
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.5 Final Pressure (psig): 3.5

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.70	0.70	0.033	0.15	0.15	0.0071	U
100-41-4	**Ethylbenzene**	1000	**2.2**	1.3	0.013	**0.51**	0.30	0.0029	
179601-23-1	**m,p-Xylenes**	1000	**3.9**	2.6	0.025	**0.89**	0.61	0.0058	
75-25-2	Bromoform	1000	1.6	1.6	0.040	0.15	0.15	0.0039	U
100-42-5	**Styrene**	1000	**5.7**	1.3	0.012	**1.3**	0.30	0.0028	
95-47-6	**o-Xylene**	1000	**1.3**	1.3	0.016	**0.30**	0.30	0.0038	
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.21	0.21	0.038	0.030	0.030	0.0056	U
541-73-1	1,3-Dichlorobenzene	1000	1.8	1.8	0.030	0.30	0.30	0.0050	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.063**	1.8	0.038	**0.011**	0.30	0.0063	BJ
95-50-1	1,2-Dichlorobenzene	1000	1.8	1.8	0.043	0.30	0.30	0.0071	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	4/6/10 2000	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1002546-01

Analytical Method: TO-15

Date Analyzed: 4/5/10 1500

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.013	0.22	0.22	0.0063	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.0086	0.023	0.023	0.0034	U
74-83-9	Bromomethane	1000	0.43	0.43	0.023	0.11	0.11	0.0060	U
75-00-3	Chloroethane	1000	0.58	0.58	0.030	0.22	0.22	0.011	U
67-64-1	**Acetone**	1000	**0.24**	5.0	0.19	**0.10**	2.1	0.079	J
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.032	0.11	0.11	0.0056	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-09-2	**Methylene Chloride**	1000	**0.032**	0.38	0.021	**0.0093**	0.11	0.0060	J
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	0.17	0.17	0.022	0.022	0.022	0.0029	U
75-15-0	**Carbon Disulfide**	1000	**0.013**	0.34	0.0071	**0.0040**	0.11	0.0023	J
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.020	0.11	0.11	0.0049	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.0062	0.22	0.22	0.0017	U
108-05-4	Vinyl Acetate	1000	5.0	5.0	0.0093	1.4	1.4	0.0026	U
78-93-3	**2-Butanone (MEK)**	1000	**0.054**	0.65	0.013	**0.018**	0.22	0.0045	J
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.027	0.11	0.11	0.0068	U
67-66-3	Chloroform	1000	0.54	0.54	0.023	0.11	0.11	0.0047	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.019	0.11	0.11	0.0046	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.018	0.11	0.11	0.0034	U
71-43-2	**Benzene**	1000	**0.022**	0.35	0.011	**0.0070**	0.11	0.0035	J
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.025	0.011	0.011	0.0040	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.026	0.11	0.11	0.0057	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.029	0.022	0.022	0.0043	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.021	0.011	0.011	0.0039	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.014	0.22	0.22	0.0031	U
108-10-1	4-Methyl-2-pentanone	1000	0.90	0.90	0.017	0.22	0.22	0.0041	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.021	0.11	0.11	0.0047	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.036	0.11	0.11	0.0066	U
108-88-3	**Toluene**	1000	**0.024**	0.41	0.0094	**0.0064**	0.11	0.0025	J
591-78-6	2-Hexanone	1000	0.45	0.45	0.020	0.11	0.11	0.0049	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.042	0.022	0.022	0.0049	U
106-93-4	1,2-Dibromoethane	1000	0.17	0.17	0.031	0.022	0.022	0.0040	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.031	0.012	0.012	0.0046	U

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1002546-01		

Analytical Method: TO-15 **Date Analyzed:** 4/5/10 1500

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.51	0.51	0.024	0.11	0.11	0.0051	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.0092	0.22	0.22	0.0021	U
179601-23-1	**m,p-Xylenes**	1000	**0.019**	1.9	0.018	**0.0043**	0.44	0.0042	J
75-25-2	Bromoform	1000	1.1	1.1	0.029	0.11	0.11	0.0028	U
100-42-5	Styrene	1000	0.94	0.94	0.0087	0.22	0.22	0.0020	U
95-47-6	o-Xylene	1000	0.95	0.95	0.012	0.22	0.22	0.0027	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.028	0.022	0.022	0.0040	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.022	0.22	0.22	0.0036	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.034**	1.3	0.027	**0.0057**	0.22	0.0045	J
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.031	0.22	0.22	0.0052	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	4/5/10 1500	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1002588-01		

Analytical Method: TO-15 **Date Analyzed:** 4/6/10 1312

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.013	0.22	0.22	0.0063	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.0086	0.023	0.023	0.0034	U
74-83-9	Bromomethane	1000	0.43	0.43	0.023	0.11	0.11	0.0060	U
75-00-3	Chloroethane	1000	0.58	0.58	0.030	0.22	0.22	0.011	U
67-64-1	**Acetone**	1000	**0.23**	5.0	0.19	**0.097**	2.1	0.079	J
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.032	0.11	0.11	0.0056	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-09-2	**Methylene Chloride**	1000	**0.026**	0.38	0.021	**0.0073**	0.11	0.0060	J
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	0.17	0.17	0.022	0.022	0.022	0.0029	U
75-15-0	Carbon Disulfide	1000	0.34	0.34	0.0071	0.11	0.11	0.0023	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.020	0.11	0.11	0.0049	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.0062	0.22	0.22	0.0017	U
108-05-4	Vinyl Acetate	1000	5.0	5.0	0.0093	1.4	1.4	0.0026	U
78-93-3	**2-Butanone (MEK)**	1000	**0.044**	0.65	0.013	**0.015**	0.22	0.0045	J
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.027	0.11	0.11	0.0068	U
67-66-3	Chloroform	1000	0.54	0.54	0.023	0.11	0.11	0.0047	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.019	0.11	0.11	0.0046	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.018	0.11	0.11	0.0034	U
71-43-2	**Benzene**	1000	**0.019**	0.35	0.011	**0.0059**	0.11	0.0035	J
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.025	0.011	0.011	0.0040	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.026	0.11	0.11	0.0057	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.029	0.022	0.022	0.0043	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.021	0.011	0.011	0.0039	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.014	0.22	0.22	0.0031	U
108-10-1	4-Methyl-2-pentanone	1000	0.90	0.90	0.017	0.22	0.22	0.0041	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.021	0.11	0.11	0.0047	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.036	0.11	0.11	0.0066	U
108-88-3	**Toluene**	1000	**0.027**	0.41	0.0094	**0.0072**	0.11	0.0025	J
591-78-6	2-Hexanone	1000	0.45	0.45	0.020	0.11	0.11	0.0049	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.042	0.022	0.022	0.0049	U
106-93-4	1,2-Dibromoethane	1000	0.17	0.17	0.031	0.022	0.022	0.0040	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.031	0.012	0.012	0.0046	U

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1001548
Project:	Leica Airs	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1002588-01		

Analytical Method: TO-15 **Date Analyzed:** 4/6/10 1312

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.51	0.51	0.024	0.11	0.11	0.0051	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.0092	0.22	0.22	0.0021	U
179601-23-1	**m,p-Xylenes**	1000	**0.018**	1.9	0.018	**0.0042**	0.44	0.0042	J
75-25-2	Bromoform	1000	1.1	1.1	0.029	0.11	0.11	0.0028	U
100-42-5	Styrene	1000	0.94	0.94	0.0087	0.22	0.22	0.0020	U
95-47-6	o-Xylene	1000	0.95	0.95	0.012	0.22	0.22	0.0027	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.028	0.022	0.022	0.0040	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.022	0.0036	0.22	0.0036	U
106-46-7	**1,4-Dichlorobenzene**	1000	**0.033**	1.3	0.027	**0.0055**	0.22	0.0045	J
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.031	0.22	0.22	0.0052	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	4/6/10 1312	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1002594-01

Analytical Method: TO-15

Date Analyzed: 4/7/10 0914

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.013	0.22	0.22	0.0063	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.0086	0.023	0.023	0.0034	U
74-83-9	Bromomethane	1000	0.43	0.43	0.023	0.11	0.11	0.0060	U
75-00-3	Chloroethane	1000	0.58	0.58	0.030	0.22	0.22	0.011	U
67-64-1	Acetone	1000	5.0	5.0	0.19	2.1	2.1	0.079	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.032	0.11	0.11	0.0056	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-09-2	**Methylene Chloride**	1000	**0.026**	0.38	0.021	**0.0074**	0.11	0.0060	J
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	0.17	0.17	0.022	0.022	0.022	0.0029	U
75-15-0	Carbon Disulfide	1000	0.34	0.34	0.0071	0.11	0.11	0.0023	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.016	0.11	0.11	0.0040	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.020	0.11	0.11	0.0049	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.0062	0.22	0.22	0.0017	U
108-05-4	Vinyl Acetate	1000	5.0	5.0	0.0093	1.4	1.4	0.0026	U
78-93-3	**2-Butanone (MEK)**	1000	**0.034**	0.65	0.013	**0.011**	0.22	0.0045	J
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.027	0.11	0.11	0.0068	U
67-66-3	Chloroform	1000	0.54	0.54	0.023	0.11	0.11	0.0047	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.019	0.11	0.11	0.0046	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.018	0.11	0.11	0.0034	U
71-43-2	**Benzene**	1000	**0.018**	0.35	0.011	**0.0056**	0.11	0.0035	J
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.025	0.011	0.011	0.0040	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.026	0.11	0.11	0.0057	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.029	0.022	0.022	0.0043	U
79-01-6	**Trichloroethene (TCE)**	1000	**0.021**	0.060	0.021	**0.0040**	0.011	0.0039	J
10061-01-5	**cis-1,3-Dichloropropene**	1000	**0.016**	1.0	0.014	**0.0035**	0.22	0.0031	J
108-10-1	**4-Methyl-2-pentanone**	1000	**0.027**	0.90	0.017	**0.0066**	0.22	0.0041	J
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.021	0.11	0.11	0.0047	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.036	0.11	0.11	0.0066	U
108-88-3	**Toluene**	1000	**0.053**	0.41	0.0094	**0.014**	0.11	0.0025	J
591-78-6	**2-Hexanone**	1000	**0.038**	0.45	0.020	**0.0093**	0.11	0.0049	J
124-48-1	**Dibromochloromethane**	1000	**0.051**	0.19	0.042	**0.0059**	0.022	0.0049	J
106-93-4	**1,2-Dibromoethane**	1000	**0.033**	0.17	0.031	**0.0043**	0.022	0.0040	J
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.031	0.012	0.012	0.0046	U

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1002594-01

Analytical Method: TO-15

Date Analyzed: 4/7/10 0914

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbv	MRL ppbv	MDL ppbv	Data Qualifier
108-90-7	Chlorobenzene	1000	0.51	0.51	0.024	0.11	0.11	0.0051	U
100-41-4	**Ethylbenzene**	1000	**0.015**	0.95	0.0092	**0.0035**	0.22	0.0021	J
179601-23-1	**m,p-Xylenes**	1000	**0.034**	1.9	0.018	**0.0078**	0.44	0.0042	J
75-25-2	**Bromoform**	1000	**0.045**	1.1	0.029	**0.0044**	0.11	0.0028	J
100-42-5	**Styrene**	1000	**0.011**	0.94	0.0087	**0.0026**	0.22	0.0020	J
95-47-6	**o-Xylene**	1000	**0.017**	0.95	0.012	**0.0040**	0.22	0.0027	J
79-34-5	**1,1,2,2-Tetrachloroethane**	1000	**0.043**	0.15	0.028	**0.0063**	0.022	0.0040	J
541-73-1	**1,3-Dichlorobenzene**	1000	**0.027**	1.3	0.022	**0.0045**	0.22	0.0036	J
106-46-7	**1,4-Dichlorobenzene**	1000	**0.053**	1.3	0.027	**0.0088**	0.22	0.0045	J
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.031	0.22	0.22	0.0052	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	4/7/10 0914	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Analyzed: 4/ 5/10

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 196049

Analyte Name	Lab Control Sample RQ1002546-02 Result	Expected	% Rec	% Rec Limits
Chloromethane	**5.17**	5.11	101	70 - 130
Vinyl Chloride	**6.67**	6.33	105	70 - 130
Bromomethane	**9.86**	9.60	103	70 - 130
Chloroethane	**6.43**	6.53	98	70 - 130
Acetone	**5.70**	6.06	94	70 - 130
Trichlorofluoromethane (CFC 11)	**14.9**	13.8	109	70 - 130
1,1-Dichloroethene	**10.8**	10.5	102	70 - 130
Methylene Chloride	**9.17**	9.12	101	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	**20.4**	19.9	102	70 - 130
Carbon Disulfide	**7.98**	8.09	99	70 - 130
trans-1,2-Dichloroethene	**9.97**	10.0	100	70 - 130
1,1-Dichloroethane (1,1-DCA)	**10.6**	10.5	101	70 - 130
Methyl tert-Butyl Ether	**8.40**	9.19	91	70 - 130
Vinyl Acetate	**8.87**	9.06	98	70 - 130
2-Butanone (MEK)	**7.57**	7.74	98	70 - 130
cis-1,2-Dichloroethene	**10.2**	10.5	97	70 - 130
Chloroform	**13.0**	12.1	107	70 - 130
1,2-Dichloroethane	**10.6**	10.6	100	70 - 130
1,1,1-Trichloroethane (TCA)	**14.2**	14.0	101	70 - 130
Benzene	**8.37**	8.38	100	70 - 130
Carbon Tetrachloride	**17.0**	16.5	103	70 - 130
1,2-Dichloropropane	**11.8**	12.0	99	70 - 130
Bromodichloromethane	**18.5**	17.1	108	70 - 130
Trichloroethene (TCE)	**14.5**	13.7	106	70 - 130
cis-1,3-Dichloropropene	**11.5**	11.2	103	70 - 130
4-Methyl-2-pentanone	**10.1**	10.8	94	70 - 130
trans-1,3-Dichloropropene	**11.5**	12.1	95	70 - 130
1,1,2-Trichloroethane	**14.8**	14.0	105	70 - 130
Toluene	**9.95**	9.98	100	70 - 130
2-Hexanone	**11.1**	10.8	103	70 - 130
Dibromochloromethane	**23.8**	21.9	108	70 - 130
1,2-Dibromoethane	**20.2**	19.8	102	70 - 130
Tetrachloroethene (PCE)	**17.6**	17.8	99	70 - 130
Chlorobenzene	**11.9**	12.1	98	70 - 130
Ethylbenzene	**11.0**	11.3	98	70 - 130
m,p-Xylenes	**21.3**	22.1	96	70 - 130

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Analyzed: 4/ 5/10

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 196049

Analyte Name	Lab Control Sample RQ1002546-02 Result	Expected	% Rec	% Rec Limits
Bromoform	**26.0**	26.3	99	70 - 130
Styrene	**10.1**	11.0	92	70 - 130
o-Xylene	**10.8**	11.3	96	70 - 130
1,1,2,2-Tetrachloroethane	**17.0**	17.8	95	70 - 130
1,3-Dichlorobenzene	**14.5**	15.3	95	70 - 130
1,4-Dichlorobenzene	**13.8**	15.5	89	70 - 130
1,2-Dichlorobenzene	**13.5**	15.0	90	70 - 130

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Analyzed: 4/ 6/10

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 196217

	Lab Control Sample RQ1002588-02			% Rec
Analyte Name	**Result**	**Expected**	**% Rec**	**Limits**
Chloromethane	**5.27**	5.11	103	70 - 130
Vinyl Chloride	**6.88**	6.33	109	70 - 130
Bromomethane	**10.2**	9.60	106	70 - 130
Chloroethane	**6.64**	6.53	102	70 - 130
Acetone	**6.18**	6.06	102	70 - 130
Trichlorofluoromethane (CFC 11)	**15.7**	13.8	114	70 - 130
1,1-Dichloroethene	**10.8**	10.5	103	70 - 130
Methylene Chloride	**9.29**	9.12	102	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	**20.4**	19.9	102	70 - 130
Carbon Disulfide	**8.22**	8.09	102	70 - 130
trans-1,2-Dichloroethene	**10.2**	10.0	101	70 - 130
1,1-Dichloroethane (1,1-DCA)	**11.1**	10.5	106	70 - 130
Methyl tert-Butyl Ether	**8.80**	9.19	96	70 - 130
Vinyl Acetate	**9.94**	9.06	110	70 - 130
2-Butanone (MEK)	**8.05**	7.74	104	70 - 130
cis-1,2-Dichloroethene	**10.4**	10.5	99	70 - 130
Chloroform	**13.5**	12.1	112	70 - 130
1,2-Dichloroethane	**10.8**	10.6	102	70 - 130
1,1,1-Trichloroethane (TCA)	**14.4**	14.0	103	70 - 130
Benzene	**8.58**	8.38	102	70 - 130
Carbon Tetrachloride	**17.9**	16.5	109	70 - 130
1,2-Dichloropropane	**12.8**	12.0	107	70 - 130
Bromodichloromethane	**19.2**	17.1	113	70 - 130
Trichloroethene (TCE)	**14.3**	13.7	104	70 - 130
cis-1,3-Dichloropropene	**11.9**	11.2	106	70 - 130
4-Methyl-2-pentanone	**10.3**	10.8	96	70 - 130
trans-1,3-Dichloropropene	**12.0**	12.1	99	70 - 130
1,1,2-Trichloroethane	**15.2**	14.0	108	70 - 130
Toluene	**10.3**	9.98	103	70 - 130
2-Hexanone	**11.4**	10.8	106	70 - 130
Dibromochloromethane	**24.9**	21.9	114	70 - 130
1,2-Dibromoethane	**20.8**	19.8	105	70 - 130
Tetrachloroethene (PCE)	**17.5**	17.8	98	70 - 130
Chlorobenzene	**12.2**	12.1	101	70 - 130
Ethylbenzene	**11.6**	11.3	102	70 - 130
m,p-Xylenes	**22.2**	22.1	100	70 - 130

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Analyzed: 4/ 6/10

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 196217

Analyte Name	Lab Control Sample RQ1002588-02 Result	Expected	% Rec	% Rec Limits
Bromoform	**27.6**	26.3	105	70 - 130
Styrene	**10.5**	11.0	95	70 - 130
o-Xylene	**11.3**	11.3	100	70 - 130
1,1,2,2-Tetrachloroethane	**18.2**	17.8	102	70 - 130
1,3-Dichlorobenzene	**14.6**	15.3	95	70 - 130
1,4-Dichlorobenzene	**14.0**	15.5	91	70 - 130
1,2-Dichlorobenzene	**13.5**	15.0	90	70 - 130

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Analyzed: 4/ 7/10

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 196246

Analyte Name	Lab Control Sample RQ1002594-02 Result	Expected	% Rec	% Rec Limits
Chloromethane	**5.53**	5.11	108	70 - 130
Vinyl Chloride	**7.23**	6.33	114	70 - 130
Bromomethane	**10.4**	9.60	108	70 - 130
Chloroethane	**6.84**	6.53	105	70 - 130
Acetone	**6.02**	6.06	99	70 - 130
Trichlorofluoromethane (CFC 11)	**16.3**	13.8	118	70 - 130
1,1-Dichloroethene	**11.3**	10.5	107	70 - 130
Methylene Chloride	**9.60**	9.12	105	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	**20.8**	19.9	104	70 - 130
Carbon Disulfide	**8.60**	8.09	106	70 - 130
trans-1,2-Dichloroethene	**10.4**	10.0	104	70 - 130
1,1-Dichloroethane (1,1-DCA)	**11.2**	10.5	107	70 - 130
Methyl tert-Butyl Ether	**8.48**	9.19	92	70 - 130
Vinyl Acetate	**9.53**	9.06	105	70 - 130
2-Butanone (MEK)	**8.00**	7.74	103	70 - 130
cis-1,2-Dichloroethene	**10.2**	10.5	97	70 - 130
Chloroform	**13.6**	12.1	112	70 - 130
1,2-Dichloroethane	**11.4**	10.6	108	70 - 130
1,1,1-Trichloroethane (TCA)	**15.4**	14.0	110	70 - 130
Benzene	**9.02**	8.38	108	70 - 130
Carbon Tetrachloride	**19.4**	16.5	118	70 - 130
1,2-Dichloropropane	**13.3**	12.0	111	70 - 130
Bromodichloromethane	**20.6**	17.1	121	70 - 130
Trichloroethene (TCE)	**15.1**	13.7	110	70 - 130
cis-1,3-Dichloropropene	**12.2**	11.2	108	70 - 130
4-Methyl-2-pentanone	**11.5**	10.8	107	70 - 130
trans-1,3-Dichloropropene	**12.2**	12.1	100	70 - 130
1,1,2-Trichloroethane	**15.6**	14.0	111	70 - 130
Toluene	**10.5**	9.98	105	70 - 130
2-Hexanone	**12.7**	10.8	118	70 - 130
Dibromochloromethane	**25.7**	21.9	117	70 - 130
1,2-Dibromoethane	**21.1**	19.8	107	70 - 130
Tetrachloroethene (PCE)	**18.1**	17.8	101	70 - 130
Chlorobenzene	**12.4**	12.1	103	70 - 130
Ethylbenzene	**11.7**	11.3	104	70 - 130
m,p-Xylenes	**22.7**	22.1	102	70 - 130

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions
Project: Leica Airs
Sample Matrix: Air

Service Request: R1001548
Date Analyzed: 4/ 7/10

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 196246

Analyte Name	Lab Control Sample RQ1002594-02 Result	Expected	% Rec	% Rec Limits
Bromoform	**27.9**	26.3	106	70 - 130
Styrene	**10.6**	11.0	97	70 - 130
o-Xylene	**11.5**	11.3	102	70 - 130
1,1,2,2-Tetrachloroethane	**19.1**	17.8	107	70 - 130
1,3-Dichlorobenzene	**14.7**	15.3	96	70 - 130
1,4-Dichlorobenzene	**13.9**	15.5	90	70 - 130
1,2-Dichlorobenzene	**13.6**	15.0	90	70 - 130

Comments:

Air - Chain of Custody Record & Analytical Service Request

Columbia Analytical Services Inc.
1 Mustard Street, Suite 250
Rochester, New York 14609-6925
Phone (585) 288-5380
Fax (585) 288-8475

Requested Turnaround Time in Business Days From Receipt, please circle
1 Day 2 Day 3 Day 4 Day 5 Day (10 Day-Standard) (circled)

CAS Project No.:

CAS Contact:

Company Name & Address (Reporting Information): Energy Solutions Inc, 100 Mill Plain Rd 2nd Fl Mailbox 106, Danbury, CT 06811

Project Name: Leica

Project Number:

Project Manager: Bob McPeak

P.O. # / Billing Information: EnergySolutions

Phone: 801-303-1092

Fax: 203-797-8994

Email Address for Result Reporting:

Sampler (Print & Sign): Wayne DeGolier [signature]

Analysis Method and/or Analytes: TO-15

Comments / Specific Instructions: Call Paul 801-303-0188 For any speical [redacted] wTR.

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Analysis: TO-15
SB-1	-001	3/23/10	11:30	SLC00148	FC00749	
IA-1	-002	↓	11:35	SLC00145	FC00710	
SB-2	-003		11:40	SLC00102	FC00757	
IA-2	-004		11:42	SLC00147	FC00774	
SB-3	-005		12:00	SLC00143	FC00750	
IA-3 -012	~~-006~~		12:00	SLC00159	FC00711	
SB-4 (KB 3/24/10)	-007		12:30	SLC00113	FC00739	
IA-4	-008		12:30	SLC00024	FC00721	
Dup	-009		12:25	SLC00160	FC00722	
QA	-010		12:45	SLC00157	FC00719	
Trip	-011			SLC00040	FC00822	

Report Tier Levels - please select
Tier I - (Results/Default if not specified) ____
Tier II (Results + QC) ____
Tier III (CLP Forms Only) ____
Tier IV (Data Validation) ____

EDD required Yes / No
Type: ____
EDD Units: ____

Project Requirements (MRLs, QAPP)

Reliquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Wayne DeGolier [signature]	3/24/10	12:30	[signature]	3/24/10	1230
[signature]	3/24/10	1440	Gregory [signature]	3/24/10	1440

R1001548
Energy Solutions, Inc.
Leica Airs

00043

Cooler Receipt And Preservation C

R1001548
Energy Solutions, Inc.
Lelca Airs

Project/Client Energy Solu. Submission Numbe

Cooler received on 3/24/10 by: KD COURIER: (CAS) UPS FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	(NO)			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant* air bubbles?	YES	NO	(N/A)		
5.	Were **Ice** or **Ice packs** present?	YES	(NO)			
6.	Where did the bottles originate?	CAS/ROC, CLIENT				
7.	Temperature of cooler(s) upon receipt:	AIR				
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: AIR Canisters

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: KB 3/25/10

Cooler Breakdown: Date: 3/25/10 by: MWC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	YES	(NO)
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact (Canisters Pressurized)	Tedlar® Bags Inflated	(N/A) MWC 3/25/10

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

Loc 010 was labeled OA instead of QA. It was matched up by canister ID.

PC Secondary Review: KB 4/14/10

*significant air bubbles are greater than 5-6 mm

H:\SMODOCS\Cooler Receipt 2.doc