August 23, 2013
Ref. No. 31129-106

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

Subject: Supplemental Office Area Sub-Slab Gas and Indoor Air Investigation Results (Performed April 2013)
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 supplemental sampling event conducted at the Leica, Inc. facility on April 16 through April 20, 2013.

1.0 Sample Types and Locations

A variety of samples were collected during the investigation including outdoor air samples (background), indoor air samples, sub-slab vapor samples, concrete dust samples, concrete chip samples and groundwater grab samples. The samples were collected from a number of different locations including one sample from outside the building, samples from the warehouse area, samples from the main office areas, samples from the loading dock area and samples from the groundwater. Sampling locations are noted in the Table below.

Table 1-1
Sample Types and Collection Areas

Location	Sample type	Analysis	Number of Samples
Outside the building	Outdoor Air	EPA TO-15	1
Main Warehouse	Indoor Air	EPA TO-15	6
Main Warehouse	Concrete dust via EPA 5035	EPA 8260	5
Main Warehouse	Concrete chip samples	EPA TO-15 of head space	5
Loading Dock SSDS area	Indoor air and Sub-Slab	EPA TO-15	8 (4 IA and 4 SS)
Main Office Area	Indoor air and Sub-Slab	EPA TO-15	10 (5 IA and 5 SS)
Main Warehouse	Groundwater Grab Samples	EPA 8260	4 (INT 10 – 13)

See the attached Figures 1, 2 and 3 included in Appendix A for sample locations. The figures depict old and new sampling locations. Although old sampling locations are shown in the figures, only data for the new sampling locations is provided on the figures. Symbols used to show the new 2013 sampling locations are pink asterisks (Indoor air), black circles with plus signs (groundwater grab samples), black dots for Sub-Slab Depressurization System (SSDS) area samples, red dots with an x for office area samples (Figure 2) and pink circles with the letters "CC" inside for concrete samples.

2.0 Sample Collection

2.1 Indoor Air and Sub-slab Vapor Samples

Indoor air and sub-slab vapor combined samples were collected in two locations. Samples SB/IA - 1, 2, 3 and 6 were collected in the loading dock area in order to provide additional data regarding the success of the SSDS installed in 2012. This data indicates the SSDS system is successfully reducing sub-slab and indoor air TCE concentrations in the loading dock area.

Indoor air and sub-slab samples were also collected at locations 8hr-051 through 8hr-055 in the main office area to further assess the air quality in this portion of the building.

Indoor air samples not combined with sub-slab samples were also collected in several areas. Samples 8hr-046 through 050 and 056 were collected in order to further assess the indoor air quality in specific areas of the building within the main warehouse.

All indoor air and sub-slab Samples were collected in accordance with the Supplemental Office Area Sub-Slab Gas and Indoor Air Investigation Work Plan, prepared by EnergySolutions in February 2012 and approved by the NYSDEC via email dated March 27, 2013. A copy of the Sampling Plan is included as Appendix B.

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, another survey was not completed for this sampling event.

Six liter SUMMA canisters were used for air/vapor sample collection and sampling occurred over a five day period from April 16 through April 20, 2013. Canisters were equipped with regulators provided by the laboratory which were set to provide air intake for approximately 8 hours.

A tee was utilized to connect three pieces of Teflon tubing. The first length of tubing was connected to the SUMMA canister, the second connected to a photoionization detection (PID) with a low-flow vacuum air pump and the third tube sealed in the hole in the floor using modeling clay. The valve on the line connected to the PID was opened and the vacuum pump

was used to purge three volumes of the tubing and monitoring of the air. Following purging activities, the vacuum pump was turned off and the valve on the tubing connected to the Suma Canister was opened to allow airflow to the canister. Pressure readings were recorded for each canister at the end of the test. Negative pressure was still present in all canisters at the end of the tests. Readings are included in the chain-of-custody documents.

Sub-slab samples SS 8hr-051 through 055 and SB 1, 2, 3 and 6, collected in accordance with NYSDOH protocols, were collected using a helium shroud in order to confirm that the samples were collected from the sub-slab and not diluted by indoor air. All nine samples collected in this manner were analyzed for the presence of helium by the laboratory. Helium concentrations in all six samples were at or below 2,454 mg/m^3 indicating that although there were some minor seal leaks, samples were not significantly compromised with the helium enriched air from within the shroud and the results are representative of the sub-slab concentrations.

The SUMMA canisters were relinquished under chain-of-custody to Columbia Analytical Services for analysis. The samples were analyzed using United States Environmental Protection Agency (EPA) Method TO-15.

2.2 Concrete Samples

Concrete samples were collected in accordance with the approved plan. Two types of samples were collected from the five selected locations including pulverized samples and chip samples both created through the use of a concrete hammer drill. Both types of samples were collected at each of the five locations. The samples were collected from within the concrete to a depth of approximately two inches. As the drill bit is advanced into the concrete, the drill flights bring a large portion of the pulverized concrete up to the floor surface and it is deposited in a pile around the hole. This pulverized dust was collected and placed in a vial and preserved in accordance with EPA method 5035 sampling protocols.

Once the dust was removed from the area surrounding the hole and from within the hole itself, concrete chips, also created by the hammer drill, were still present in the bottom of the hole. These chips were collected and place in a 4 ounce sampling container for eventual head space analysis. Chips were sent to the laboratory and placed immediately into a sealed chamber which was connected directly to a gas chromatograph. The chip samples were allowed to off-gas for one week in the sealed chamber, and then the head space gas was drawn into the chromatograph and analyzed using EPA method TO-15. Concrete data is summarized in Table 1.

2.3 Groundwater Samples

Groundwater data was also collected from the Site as an integral part of this portion of the investigation. The original Second Supplemental Sub-Slab Gas Investigation Workplan implemented in September of 2012, proposed the collection of groundwater grab samples from four locations within the building including temporary wells INT 10, INT 11, INT 12, and INT

13 which were3 installed in September of 2012. Groundwater grab sample locations are shown on Figure 1. Wells INT-12 and 13 had been sampled in the past; however, this round of sampling was the first time groundwater was available in wells INT-10 and 11.

3.0 Analytical Results

3.1 Indoor Air and sub-slab data

Indoor air sample results included in Table 2 in Appendix C were compared to published OSHA PEL workplace standards. OSHA has established eight hour time weighted average indoor air concentration action levels for several volatile organic compounds (VOCs) in the 1910.1000 guidance including the main Contaminant of Concern (COC) TCE. Table 3 includes a summary of the sub-slab vapor concentrations. Copies of Tables 2 and 3 are included in Appendix C.

3.1.1 Warehouse

As in previous sampling events, trichloroethylene (TCE), was the contaminant most frequently detected during the vapor intrusion survey. TCE was detected in all samples collected from within the building and beneath the floor with the exception of the samples collected from one location within the SSDS area. The SSDS operation has successfully reduced TCE concentrations to non-detectable levels in the sub-slab vapors at location SB-2. The highest TCE concentration collected from the main warehouse area indoor air was 33 ug/m^3 at location 8hr-056 which is located in the immediate vicinity of the former Plating Shop suspected to be a source area; these results are consistent with previous data from this area (Sample 8hr-045 at 21 ug/m^3, September 2012).

As expected, Indoor air concentrations of TCE at other sampling locations in the northern and southern areas of the main warehouse, including samples 8hr-046 through 050 were lower than concentrations typically seen in the central portions of the warehouse near the potential release areas. Samples 8hr-049 and 050, collected in the far northern portion of the main warehouse, contained TCE concentrations at 1.7 ug/m^3 and 0.76 ug/m^3 respectively. These results were expected based on the distance from the main sources of contamination. Indoor Air samples 8hr-046 through 048 contained slightly higher TCE concentrations at 3.1 ug/m^3, 4.3 ug/m^3 and 3.4 ug/m^3 respectively. The slightly elevated concentrations in these areas may be the result of additional sources in the area including sub-slab vapors at INT-10 and INT-11 as well as possible TCE contamination in the concrete floor.

3.1.2 Main Office Area

The highest TCE concentration detected in indoor air samples collected from the main office area was 3.1 ug/m^3 at location 8hr-052. The highest TCE concentration detected in sub-slab samples collected from the office area was 950 ug/m^3 at location 8hr-053. The next highest reading in the sub-slab was 150 ug/m^3 detected at location 8hr-051. These results suggest that although the past

use of cleaning solvents appears to have affected the office area, the influence is somewhat limited. As in the warehouse area, all indoor air results are significantly below the OSHA PELs. The indoor air concentrations at 8hr-053 are only 1.8 ug/m^3, significantly lower than the sub-slab concentration of 950 ug/m^3 in this area. The results yield a Vapor Attenuation Factor (VAF) of 0.0019, significantly lower than the EPA VAF of 0.03 for sub-slab soil gas recommended in the OSWER final guidance for assessing and mitigating vapor intrusion suggesting that the indoor migration from the sub-slab concentrations is limited in this area.

3.1.3 Loading Dock Area (SSDS Area)

The highest TCE concentration detected in indoor air samples collected from the loading dock area was 8.0 ug/m^3 in sample location IA-6 and the highest concentration detected in sub-slab samples collected from the area was 2,700 ug/m^3 in sample SB-1. Results in this area indicate that the SSDS is successfully reducing the TCE concentration in the sub-slab vapors. A summary of this data is included in Table 4 in Appendix C. VOC concentrations in sub-slab vapors have dropped for all parameters at locations SB-1 and SB-2. These locations are within the immediate proximity (10 to 20 feet) of the vacuum draw points and significant reductions in these areas are expected. The TCE concentration in the sub-slab sample at location SB-1 which was once as high as 190,000 ug/m^3 has now been reduced to only 2,700 ug/m^3, a reduction of more than 98 %. TCE concentrations at location SB-2, once at a concentration of 12,000 ug/m^3 are now at non-detectable levels. The laboratory data is included as Appendix D. All indoor air concentrations for each parameter tested are below the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) at every location. Figure 2 depicts the indoor air and sub-slab data collected in April 2013.

3.2 Concrete Data

The concrete chip sample analysis was performed with the intention of simulating the potential evaporation of VOCs from the concrete that may be occurring at the facility. Chlorinated solvents were detected in the concrete chip sample head space analyses as suspected suggesting that this volatilization is occurring. TCE was detected in the head space of four of the five samples excluding the sample from the office area intended to represent background/unaffected conditions. TCE concentrations ranged from a low of 6.4 ug/m^3 in sample CC-01 to a maximum of 110 ug/m^3in sample CC-02. DCE was also detected in sample CC-02 at a concentration of 61 ug/m^3.

Several contaminants were detected at minor concentrations in the pulverized concrete dust samples, including 2-butanone (MEK), 2- hexanone, acetone and xylenes. The presence of MEK is not unexpected, based on its use in paints, rubber-based industrial cements and printing inks. The source may have been historic or current Sam-Son operations. 2-hexanone is most likely the result of historic use as it was formerly used as a paint thinner, but is no longer used in the US. The xylenes are also most probably present as a result of historic use.

Although these alternate contaminants were detected in the concrete dust samples, the main site contaminant TCE was not detected in any of the concrete dust samples.

Concrete data is summarized in Table 1 in Appendix C. The presence of significant TCE in the head space analyses when compared to the lack of TCE in any of the dust samples suggests that the procedure utilized to collection the dust samples was too aggressive and contaminants evaporated during the sample collection process. The head space data further suggests that the presence of TCE in the concrete floors may be a continuing source of contamination in the indoor air. Laboratory data is included in Appendix D.

3.3 Groundwater Data

The new groundwater data collected from wells INT 12 and INT 13 during this sampling round continues to confirm the site conceptual model. Sample INT 12, collected from a well located in between the original dry well release just outside the loading dock area (near MW-16R and 16A) and well INT 2, once again contained TCE at a concentration of 2,400 ug/l, identical to the concentration detected in the October 2012 sample. This concentration is consistent with the concentrations originally detected in MW-24, but significantly lower than the concentration of 82,000 ug/l detected in well INT 2 in 2011. There are several plausible explanations for these variations. The differential between these concentrations may suggest that although well INT 2 may be impacted to some degree from the original dry well release, there may be other sources of TCE contributing to this well. A second explanation may be that the concentrations in well INT-12 have been reduced by the influence of the HRC injection (similar to the reductions observed in the MW-24 well pair); however, this reducing influence may not hvae reached well INT-2.

In addition, concentrations in INT-13 continue to confirm the conceptual model in this area as well. The low TCE concentration of 160 ug/l (210 ug/l in October 2012) in the sample collected from well INT-13 continues to indicate that the groundwater in this area beneath the former Plating Shop is not heavily contaminated. This groundwater data suggests that the high concentrations (51,000 ug/m^3) in the sub-slab vapors at location 8hr-037 are probably the result of surface spills from inside the building and not the result of evaporation from the groundwater migrating beneath the area.

Data from samples collected from wells INT-10 and INT-11 indicates that there may be two separate sources, one in the vicinity of each of these wells. Table 5 entitled Data Summary and Correlation by Area, provides information regarding the correlation between groundwater and sub-slab data in the various areas of the facility. Based on this information, it appears that the contamination detected in wells INT-10, INT-11, and INT 2 may be the result of different source areas. These conclusions are based on the following. Geologic cross sections of the area with groundwater data added are provided as Figures 4, 5 and 6.

When compared to sample INT-2, the sample collected from well INT-11 contains additional compounds (TCA and PCE) and differing ratios of parent to daughter products. Sample INT-2 TCE (82,000 ug/l) to DCE (9,100 ug/l) ratios are 900% whereas the ratios in well INT-11 are 0.06%. This difference could possibly be the result of reductive de-chlorination between the two wells; however, an additional line of evidence corroborates the thought that there are additional contaminant contributions affecting the groundwater between these two wells. Past sub-slab data indicates there are very low TCE concentrations in the sub-slab vapors in the area to the south of INT-2 between wellsINT-2 and INT-11. These low TCE vap0or concentrations are represented by samples 011 (TCE 130 ug/m^3), 025 (TCE 3.5 ug/m^3), 017 (TCE 220 ug/m^3) and 018 (TCE 65 ug/m^3). These low sub-slab concentrations between INT-2 and INT-11 suggest that the groundwater is not highly contaminated immediately downgradient of location INT-2, but the TCE concentrations in the sub-slab at location INT-11 rise once again to 3,600 ug/m^3 in sample 008 and 3,500 ug/m^3 in sample 027. This variation in the TCE concentrations in the sub-slab vapors suggests that the groundwater contamination may not continuous from INT-2 to INT-11 and that the elevated concentrations at location INT-11 may be the result of local surface spills and not migration of groundwater from location INT-2 to the northeast.

Although samples from wells INT-2 and INT-10 contain similar compounds with similar parent/ daughter product ratios, past sub-slab data once again indicates there are very low TCE concentrations in the sub-slab vapors in the area south west of INT-2 between the two wells represented by samples 012 (TCE 23 ug/m^3), 013 (TCE 6.9 ug/m^3), 015 (TCE 18 ug/m^3) and 033 (TCE 390 ug/m^3), whereas the TCE concentrations in the sub-slab immediately above INT-10 rises once again to 60,000 ug/m^3 in sample 028 and 51,000 ug/m^3 in sample 8hr-038. In addition, groundwater data from well INT-3 located in between wells INT-2 and well INT-10 contains very low concentrations of TCE (200 ug/l). Both of these data sets suggest that the groundwater contamination is not continuous from INT-2 to INT-10 and that the elevated concentrations at location INT-10 may be the result of surface spills in the area and not mifration of groundwater from location INT-2.

A summary of the groundwater data collected from INT-10 through INT-13 is included in Table 6.

4.0 Response Actions

The following potential future actions are planned or under consideration.

- Continued assessment of the SSDS system through monitoring of the vapors in the loading dock area.
  Install additional bedrock monitoring wells inside the main warehouse areas in order to provide data which may be used to further delineate the extent of groundwater contamination beneath the building, both laterally and vertically.

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, LSRP
Department Manager, Environmental Services

Enclosure
cc: C. Grabinski
J. Egan
M. Forcucci, NYSDOH

Enclosures:

Appendix A Figures

Figure 1	Site Plan, Outdoor Air Sample Location
Figure 2	Supplemental Office Area Sub-Slab gas and Indoor Air Investigation Results, Warehouse
Figure 3	Supplemental Office Area Sub-Slab gas and Indoor Air Investigation Results, Office Area
Figure 4	Geological Cross Section Plan
Figure 5	A – A' Geological Cross Section
Figure 6	B – B' Geological Cross Section

Appendix B Sampling Plan

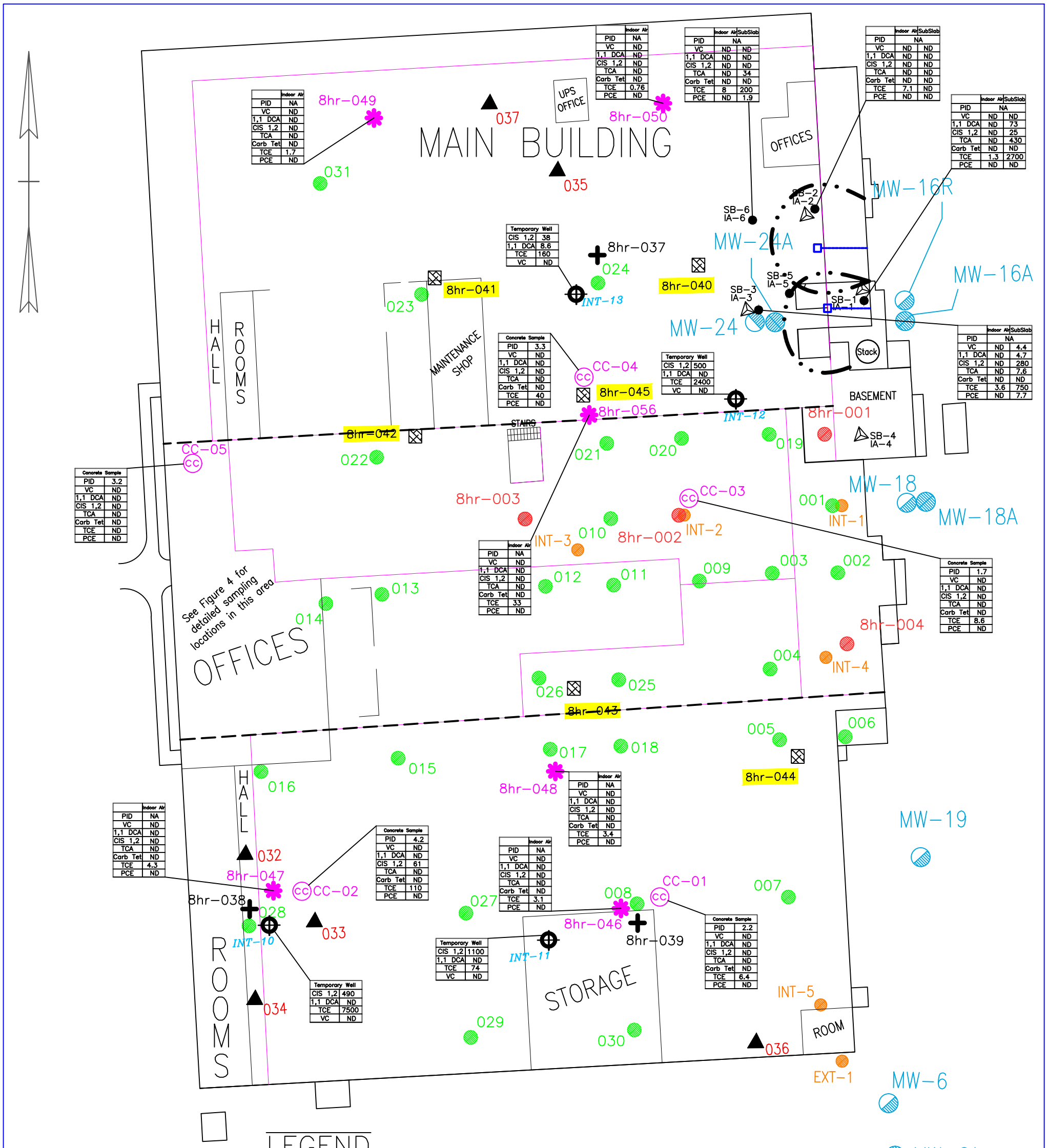
Appendix C Data Tables

Table 1	Summary of Concrete Chip Sample Data
Table 2	Summary of Indoor Air Sample Results
Table 3	Summary of Sub-slab Sample Results
Table 4	Summary of Sub-slab Depressurization System Performance Monitoring Data
Table 5	Data Summary and Correlation by Area
Table 6	Summary of Groundwater Data

Appendix D Laboratory Data

APPENDIX A FIGURES

DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT ROAD CHEEKTOWAGA, NY	ENERGYSOLUTIONS 100 Mill Plain Road Danbury, CT 06811 203-797-8301	PROJECT # 137015 FILENAME:
REVISION NO.	DRAWING	Site Plan, Outdoor Air Sample Location		SCALE: SEE SCALEBAR DATE: 6/21/13 BY: MT CK: FIGURE # 1



	Indoor Air
PID	NA
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	1.7
PCE	ND

	Indoor Air
PID	NA
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	0.76
PCE	ND

	Indoor Air	SubSlab
PID	NA	
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	ND
TCA	ND	34
Carb Tet	ND	ND
TCE	8	200
PCE	ND	1.9

	Indoor Air	SubSlab
PID	NA	
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	ND
TCA	ND	ND
Carb Tet	ND	ND
TCE	7.1	ND
PCE	ND	ND

	Indoor Air	SubSlab
PID	NA	
VC	ND	ND
1,1 DCA	ND	73
CIS 1,2	ND	25
TCA	ND	430
Carb Tet	ND	ND
TCE	1.3	2700
PCE	ND	ND

Temporary Well	
CIS 1,2	38
1,1 DCA	8.6
TCE	160
VC	ND

Temporary Well	
CIS 1,2	500
1,1 DCA	ND
TCE	2400
VC	ND

Concrete Sample	
PID	3.3
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	40
PCE	ND

	Indoor Air	SubSlab
PID	NA	
VC	ND	4.4
1,1 DCA	ND	4.7
CIS 1,2	ND	280
TCA	ND	7.6
Carb Tet	ND	ND
TCE	3.6	750
PCE	ND	7.7

Concrete Sample	
PID	3.2
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	ND
PCE	ND

	Indoor Air
PID	NA
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	33
PCE	ND

	Indoor Air
PID	NA
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	3.4
PCE	ND

Concrete Sample	
PID	1.7
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	8.6
PCE	ND

	Indoor Air
PID	NA
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	4.3
PCE	ND

Concrete Sample	
PID	4.2
VC	ND
1,1 DCA	ND
CIS 1,2	61
TCA	ND
Carb Tet	ND
TCE	110
PCE	ND

	Indoor Air
PID	NA
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	3.1
PCE	ND

Temporary Well	
CIS 1,2	1100
1,1 DCA	ND
TCE	74
VC	ND

Temporary Well	
CIS 1,2	490
1,1 DCA	ND
TCE	7500
VC	ND

Concrete Sample	
PID	2.2
VC	ND
1,1 DCA	ND
CIS 1,2	ND
TCA	ND
Carb Tet	ND
TCE	6.4
PCE	ND

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NEW SAMPLE RESULTS APRIL 2013

- SSDS draw points and piping
- Approximate limits of SSDS zone of influence
- Indoor Air Sample, µg/m³
- Concrete Sample,(1) µg/m³
- SB-6 IA-6 SSDS Indoor Air and Subslab Air Samples, µg/m³
- Groundwater grab samples (4/2013), µg/L — INT-12

NOTE: All air results are in µg/m³
All groundwater results are in µg/L
NA: Not Analyzed

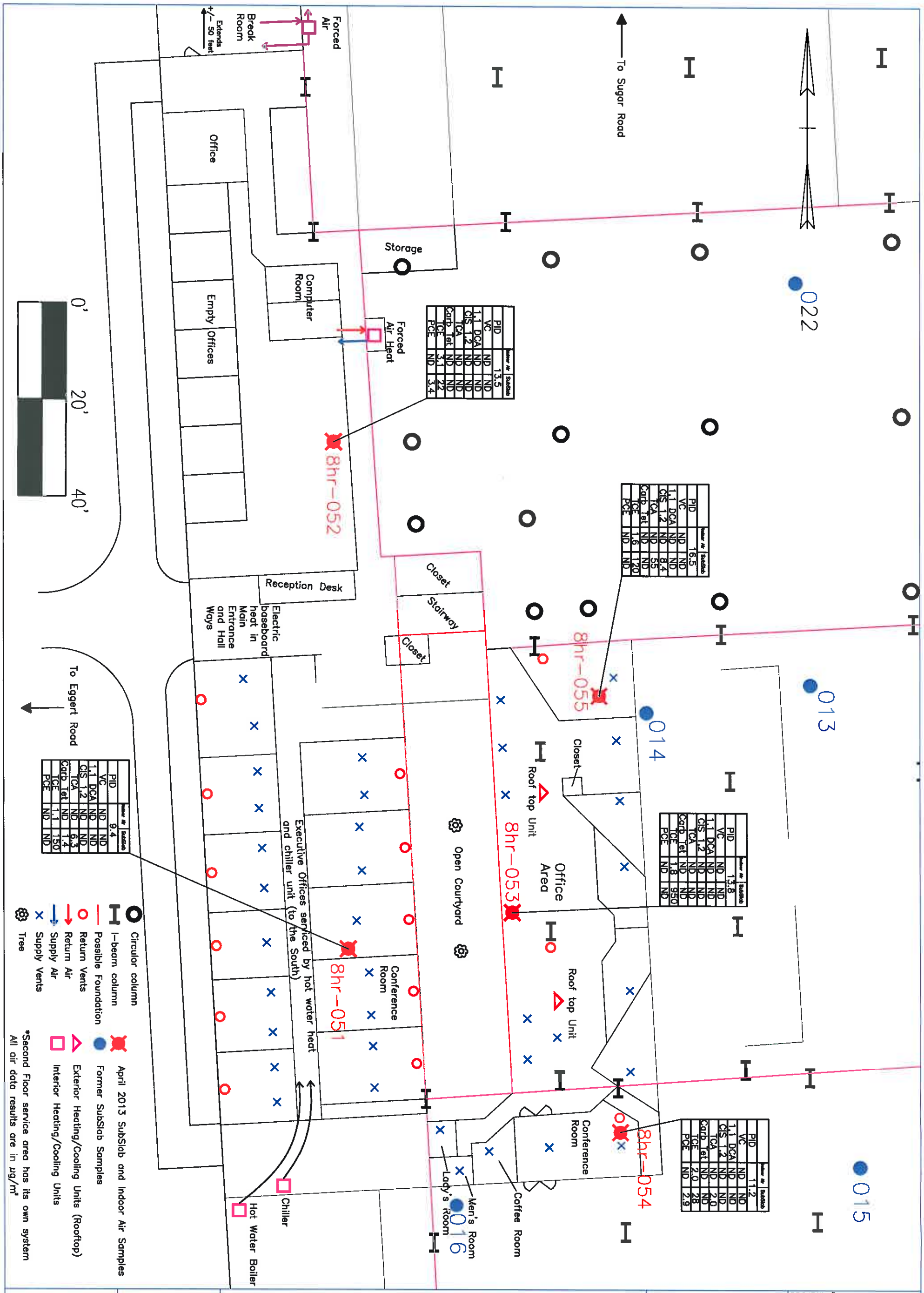
(1) Solid concrete samples were also analyzed from each CC location, all ND for TCE

FORMER DATA

- 8hr-037 = 8 hour subslab correlation samples (9/2012)
- 033 = 30-minute Subslab samples (9/2012)
- INT-12 = Groundwater grab samples (9/2012)
- 8hr-042 = DOH method Indoor air & subslab samples (9/2012)
- INT-1 = GROUNDWATER GRAB SAMPLES (6/2011)
- SB-4 IA-4 = INDOOR AIR AND SUBSLAB AIR SAMPLES (3/2010)
- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- 025 = 30 MINUTE SUBSLAB SAMPLES (9/2011)
- 8hr-002 = DOH METHOD INDOOR AIR AND SUBSLAB SAMPLES (9/2011)
- Courtyard Foundation
- Possible Foundation
- Non-support Interior Walls

DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC.	PROJECT # 137015
			FILENAME:
REVISION NO.	DRAWING	Supplemental Office Area Sub-Slab gas and Indoor Air Investigation Results, Warehouse	SCALE: See Scalebar; DATE: 8/21/13; BY: MT; CK: RM; FIGURE # 2

ENERGY SOLUTIONS
100 MILL PLAIN RD
DANBURY, CT. 06811
(203)797-8301



	Indoor Air	SubSlab
PID	16.5	ND
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	8.4
TCA	ND	55
Carb Tet	ND	ND
TCE	1.6	120
PCE	ND	ND

	Indoor Air	SubSlab
PID	13.5	
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	ND
TCA	ND	ND
Carb Tet	ND	ND
TCE	3.1	22
PCE	ND	3.4

	Indoor Air	SubSlab
PID	13.8	
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	ND
TCA	ND	ND
Carb Tet	ND	950
TCE	1.8	ND
PCE	ND	ND

	Indoor Air	SubSlab
PID	11.2	
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	ND
TCA	ND	2.0
Carb Tet	ND	28
TCE	2.0	ND
PCE	ND	2.9

	Indoor Air	SubSlab
PID	9.4	
VC	ND	ND
1,1 DCA	ND	ND
CIS 1,2	ND	ND
TCA	ND	6.3
Carb Tet	ND	1.4
TCE	1.1	150
PCE	ND	ND

DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY
REVISION NO.	DRAWING	Supplemental Office Area Sub-Slab gas and Indoor Air Investigation Results, Office Area

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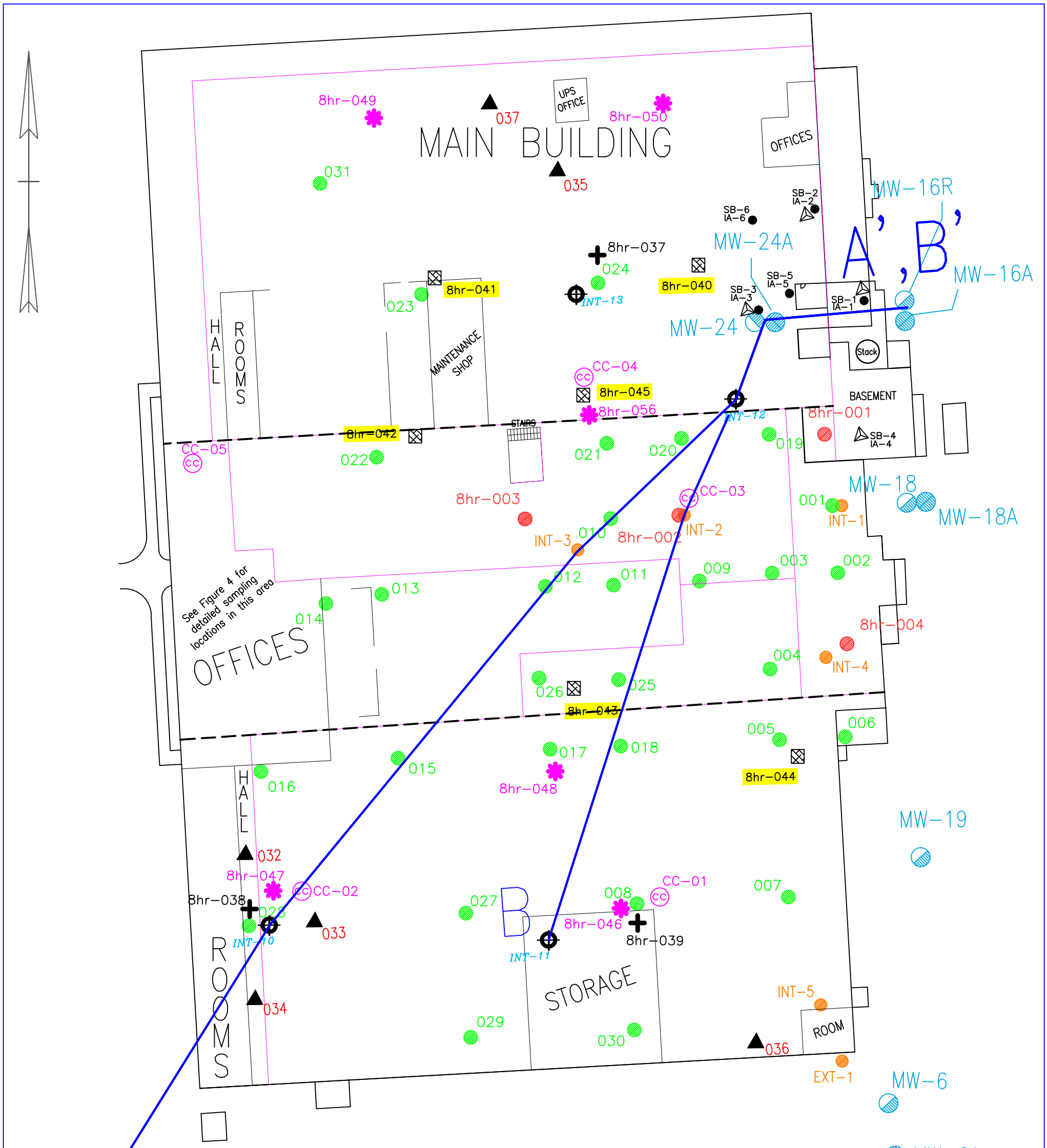
(203)797-8301

PROJECT # 137015
FILENAME:
SCALE: See Scalebar
DATE: 6/21/13
BY: MT
CK: RM
FIGURE # 3



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NEW SAMPLE RESULTS APRIL 2013

- Indoor Air Sample, µg/m³
- CC Concrete Sample,(1) µg/m³
- SB-6 IA-6 SSDS Indoor Air and Subslab Air Samples, µg/m³
- INT-12 Groundwater grab samples (4/2013), µg/L

NOTE: All air results are in µg/m³
All groundwater results are in µg/L

NA: Not Analyzed

(1) Solid concrete samples were also analyzed from each CC location, all ND for TCE

FORMER DATA

- 8hr-037 = 8 hour subslab correlation samples (9/2012)
- 033 = 30-minute Subslab samples (9/2012)
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- INT-1 = GROUNDWATER GRAB SAMPLES (6/2011)
- SB-4 IA-4 = INDOOR AIR AND SUBSLAB AIR SAMPLES (3/2010)
- MW-2 = OVERBURDEN MONITORING WELL
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- 025 = 30 MINUTE SUBSLAB SAMPLES (9/2011)
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- Possible Foundation
- Non-support Interior Walls

DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC.	PROJECT # 137015
			FILENAME:
REVISION NO.	DRAWING	Geological Cross Section Plan	SCALE: See Scalebar; DATE: 8/21/13; BY: MT; CK: RM
			FIGURE # 4

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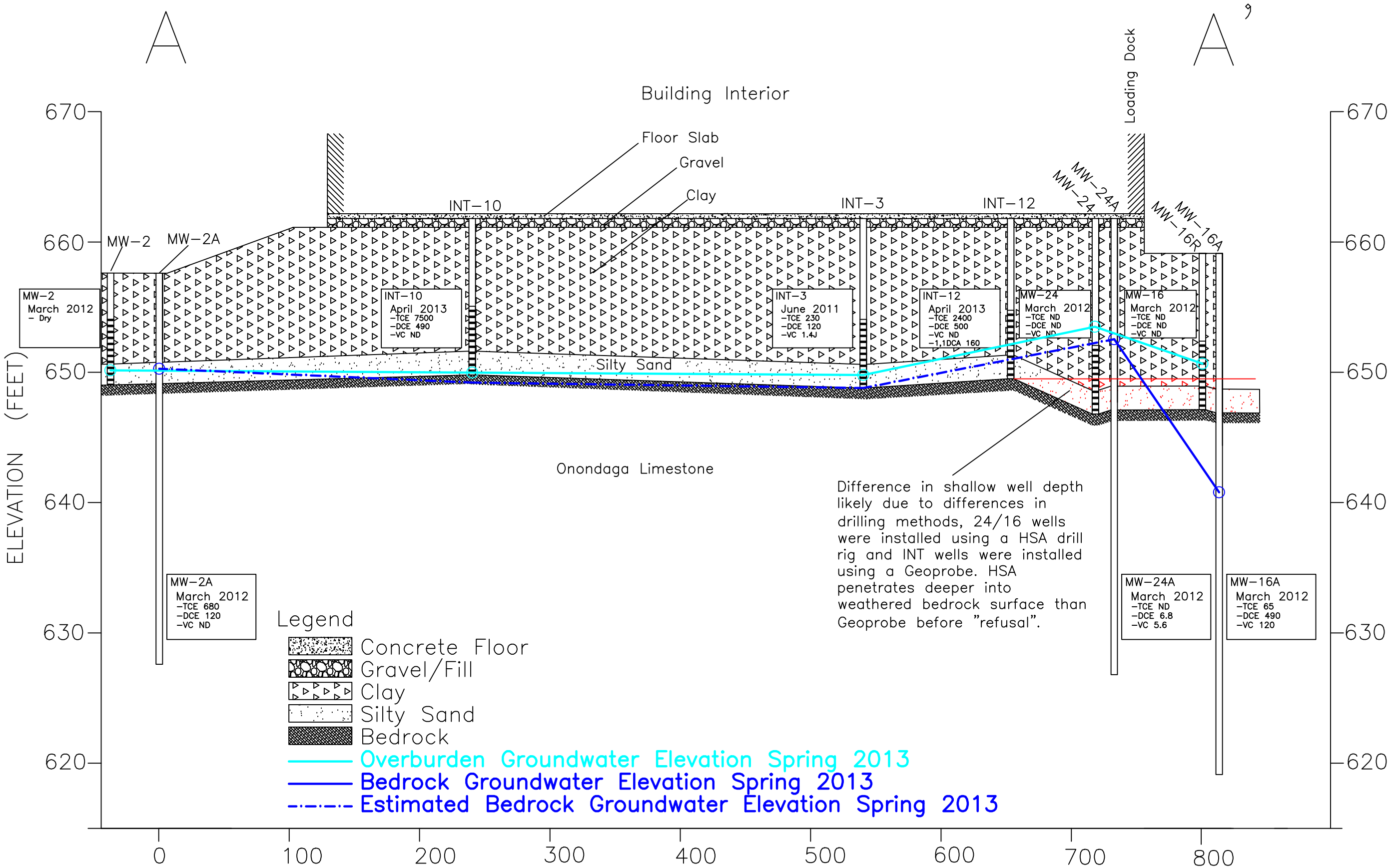

Notes: All Concentrations shown in ug/L
Only TCE, Cis 1,2 DCE, and VC data shown

PROJECT # 137015
FILENAME:
SCALE: See Scalebar
DATE: 8/14/13
BY: DRS
CK: RM
FIGURE # 5

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LEICA MICROSYSTEMS INC.

PROJECT

A-A' Geological Cross Section

DRAWING

DOCUMENT CONTROL NO.

REVISION NO.

B

B'

Building Interior

Floor Slab

Gravel

Clay

INT–11

INT–2

INT–12

MW–24A

MW–24

MW–16A

MW–16

INT–11
April 2013
–TCE 66
–DCE 1100
–VC ND

INT–2
June 2011
–TCE 282000
–DCE 9100
–VC ND

INT–12
April 2013
–TCE 2400
–DCE 500
–VC ND
–1,1DCA 160

MW–24
March 2012
–TCE ND
–DCE ND
–VC ND

MW–16
March 2012
–TCE ND
–DCE ND
–VC ND

Silty Sand

Onondaga Limestone

Difference in shallow well depth likely due to differences in drilling methods, 24/16 wells were installed using a HSA drill rig and INT wells were installed using a Geoprobe.

MW–24A
March 2012
–TCE ND
–DCE 6.8
–VC 5.6

MW–16A
March 2012
–TCE 65
–DCE 490
–VC 120

ELEVATION (FEET)

670
660
650
640
630
620

Legend

- Concrete Floor
- Gravel/Fill
- Clay
- Silty Sand
- Bedrock
- Overburden Groundwater Elevation Spring 2013
- Bedrock Groundwater Elevation Spring 2013
- Estimated Bedrock Groundwater Elevation Spring 2013

0 100 200 300 400 500

HORIZONTAL DISTANCE (FEET)

Notes: All Concentrations shown in ug/L
Only TCE, Cis 1,2 DCE, and VC data shown

PROJECT # 137015
FILENAME:
SCALE: See Scalebar
DATE: 6/21/13
BY: MT
CK: RM
FIGURE # 6

ENERGY SOLUTIONS

100 MILL PLAIN RD
DANBURY, CT. 06811
(203)797–8301

PROJECT: LEICA MICROSYSTEMS INC.

DRAWING: B–B' Geological Cross Section

DOCUMENT CONTROL NO.

REVISION NO.

ENERGYSOLUTIONS

APPENDIX B SAMPLING PLAN

SUPPLEMENTAL OFFICE AREA SUB-SLAB GAS AND INDOOR AIR INVESTIGATION WORK PLAN

Leica, Inc. Site
Eggert and Sugar Roads
Town of Cheektowaga, Erie County, New York
Site ID Number 915156

Prepared for

Leica, Inc., c/o Videojet Tech
1500 Mittell Boulevard
Wood Dale, Illinois 60191

And

New York State Department of Environmental Conservation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

February 2013

SUPPLEMENTAL OFFICE AREA SUB-SLAB GAS AND INDOOR AIR INVESTIGATION WORK PLAN
Leica, Inc. Site
Eggert and Sugar Roads
Cheektowaga, New York
NYSDEC Site ID 915156

Project No. 137015 **Revision 0**

Prepared for:

Leica, Inc., c/o Videojet Tech
1500 Mittell Boulevard
Wood Dale, IL 60191

and

NYSDEC, Region 9
270 Michigan Avenue
Buffalo, NY 14203-299

Prepared by:
Energy*Solutions*, LLC
100 Mill Plain Road, Second Floor, Mailbox No. 106
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Senior Environmental Engineer

Approved By: _____ _____
Robert E. McPeak, Jr., P.E., LEP — Date
Manager, Environmental Services

[X] Non-Proprietary
[ ] Proprietary
[ ] Restricted Information
[ ] Safeguards Information
[ ] Sensitive Security Information

[X] New
[ ] Title Change
[ ] Revision
[ ] Rewrite
[ ] Cancellation

Effective Date _____

Table of Contents

FIGURES

ACRONYMS AND ABBREVIATIONS

COC	Chain-of-Custody
CRA	Conestoga-Rovers & Associates
CSM	Conceptual Site Model
DCE	cis-1,2-Dichloroethene
Energy*Solutions*	Energy*Solutions*, LLC
EPA	United States Environmental Protection Agency
HRC	Hydrogen Release Compound®
Leica	Leica, Inc.
NELAP	National Environmental Laboratory Accreditation Program
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PELs	Permissible Exposure Limits
PID	Photo-Ionization Detector
QA	Quality Assurance
QC	Quality Control
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
Site	Leica, Inc. Site: NYSDEC Site ID Number 915156
SOP	Standard Operating Procedure
TCA	1,1,1-Trichloroethane
TCE	Tricholoroethene
VC	Vinyl Chloride
VOC	Volatile Organic Compound

1.0 INTRODUCTION

On behalf of Leica, Inc., c/o Videojet Tech of Wood Dale, Illinois (Leica), Energy*Solutions*, LLC (Energy*Solutions*) has prepared this **SUPPLEMENTAL OFFICE AREA SUB-SLAB GAS AND INDOOR AIR INVESTIGATION WORK PLAN** for the former Leica facility located on the Leica, Inc. site (Site) at Eggert and Sugar Roads, Cheektowaga, New York (New York State Department of Environmental Conservation (NYSDEC) Site ID Number 915156). A Site Location Map is included as Figure 1. A Site Plan showing the building, site features, and monitoring well locations is included as Figure 2. Proposed sample locations and building layout are included in Figure 3 and Figure 4.

This work plan is prepared in response to and based on the results from the implementation of the *Supplemental Sub-Slab Gas Investigation Work Plan*, CS-OP-PN-060, Rev. 0 (Ref. No. 1.1.1) completed in September of 2011 and the Second supplemental Sub-Slab Gas Investigation Work Plan, Central Building Areas, completed in September 2012 and reported to NYSDEC in February of 2013 (Reference 1.2.14). This *Supplemental Office Area Sub-Slab Gas and Indoor Air Investigation Work Plan* is an addition to the investigation/mitigation effort proposed in the *Vapor Mitigation Work Plan* prepared by Energy*Solutions* in November 2010 (Ref. No. 1.1.3).

Following completion of the Second *Supplemental Sub-Slab Gas Investigation Work Plan*, Central Building Areas, performed in September 2012, it became evident that elevated concentrations of Contaminants of Concern (COCs) could be present in the former Leica facility office areas to the west of the samples collected. These office areas are still active and are currently occupied by SamSon Warehousing employees. This supplemental plan for the office and warehouse areas will be implemented in order to further assess the concentrations of Volatile Organic Compounds (VOCs) in the Sub-Slab vapors and indoor air in the warehouse and office areas located in the far western side of the building. Data collected during this investigation will be used when making decisions regarding the need for mitigation in the area.

1.1 Purpose

The purpose of this work plan is two-fold. The first is to fill in data gaps that were evident following the completion of the Second *Supplemental Sub-Slab Gas Investigation Work Plan*, Central Building Areas. During the implementation of the Second *Supplemental Sub-Slab Investigation Work Plan*, 22 soil gas and ambient air samples (including one duplicate) were collected in addition to two (2) groundwater grab samples. This work plan has been generated based on the results of those sample efforts. The second purpose is to collect air data in the vicinity of the entry way and loading dock area in the northeastern corner of the building in order to assess the success of the new sub-slab depressurization system (SSDS) which was installed in late 2012.

The scope of this work plan is to obtain two (2) additional groundwater grab samples and five (5) additional Sub-Slab and Ambient/Indoor air samples at

locations within the office areas at the former Leica facility to further delineate the extent of groundwater and soil vapor contamination under the floor and within the office areas. This supplemental office area investigation will also include collection of five additional indoor air samples in the far northern and southern sections of the main warehouse, a review of air flow patterns and pressure differentials in several areas of the building, collection of concrete samples, and collection of additional Groundwater Grab Samples. Finally, the investigation will include collection of indoor air and subslab samples from four locations in the vicinity of the new SSDS.

1.2 References

1.1.1 Energy*Solutions*, *Supplemental Sub-Slab Gas Investigation Work Plan.* CS-OP-PN-060, Rev. 0

1.1.2 Energy*Solutions*, Second Supplemental Sub-Slab Gas Investigation Work Plan, CS-OP-PN-072, Rev. 0

1.1.3 Energy*Solutions*, *Vapor Mitigation Work Plan*, Leica, Inc. (Site #915156), Cheektowaga, Erie County, New York, November 2010

1.1.4 31129-095, *Sub-Slab Groundwater Sampling Results, Leica, Inc. Site; Erie County, Cheektowaga, New York, Inactive Hazardous Waste Disposal Site 915156*, July 12, 2011

1.1.5 Conestoga-Rovers & Associates, *Remedial Investigation Report, Leica, Inc., Cheektowaga, New York, Site Code 915156*, October 1994

1.1.6 Conestoga-Rovers & Associates, *Remedial Pre-Design Work Plan, Leica, Inc., Cheektowaga, New York, Site Code 915156*, March 1996

1.1.7 NES, Inc., *Feasibility Study Addendum Submittal, Leica Optical Site, Cheektowaga, New York*, February 3, 1997

1.1.8 New York State Department of Environmental Conservation, Division of Environmental Remediation, *Record of Decision, Leica, Incorporated Site, Town of Cheektowaga, Erie County, Registry Number 915156*, March 1997

1.1.9 Beacon Environmental Services, Inc., *Passive Soil-Gas Survey, Leica Site, Cheektowaga, New York*, prepared for SCIENTECH, Inc., July 19, 2005, Beacon Report No. EM1789

1.1.10 Energy*Solutions*, *Supplemental Area B Soil Remediation Using Hydrogen Release Compound (HRC), Remedial Action Work Plan for the Leica, Inc. Site, Cheektowaga, New York*, May 2007

1.1.11 New York State Department of Environmental Conservation, Approval of *HRC Injection Plan for Area B, Leica, Inc. (Site #915156), Cheektowaga, New York*, November 14, 2007

1.1.12 *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, October 2006

1.1.13 Energy*Solutions*, *Supplemental Area B Indoor Air and Sub-Slab Soil Gas Sampling Plan* Leica, Inc. Site, Cheektowaga, New York, September 2006

1.2.14 EnergySolutions, *Second Supplemental Sub-Slab Gas Sampling Investigation Results*, Letter dated February 12, 2013 from R. McPeak to J. Walia

1.3 Background

The building is owned and operated as a warehouse and distribution center by SamSon Distributing. Currently, there are no activities conducted within the building that use products containing VOCs; however, such products have been used in the past.

Leica, with NYSDEC approval, initiated a Remedial Investigation/Feasibility Study (RI/FS) in November 1993 to address the contamination at the Site. The RI was completed in October 1994 by Conestoga-Rovers & Associates (CRA) (Ref. No. 1.1.5). An FS was submitted by CRA in May 1995 with subsequent revisions in July 1995 and March 1996 (Ref. No. 1.1.6). The final FS addendum was submitted by NES, Inc. (now Energy*Solutions*) in February 1997 (Ref. No. 1.1.7). Upon issuance of a Record of Decision (ROD) in 1997 (Ref. No. 1.1.8), NYSDEC authorized Leica to begin activities necessary to design and implement the chosen remedial alternative at the Site. NES, Inc. (now Energy*Solutions*) was contracted in 1997 by Leica to design, install and operate a remediation system at the Site which was completed in 1999. A Site Plan showing the location of the remediation areas is included as Figure 2.

In order to determine the potential source of the elevated VOC concentrations in groundwater samples collected from Area B monitoring wells MW-16R and MW-16A, SCIENTECH (now Energy*Solutions*) completed a soil gas survey of the area surrounding these wells in June 2005. Area B includes a former dry well located immediately to the east of the main loading dock. The results of the study were provided to NYSDEC on July 19, 2005 (Ref. No. 1.1.9). Several COCs were detected in the soil gas survey including trichloroehthene (TCE), 1,1,1 trichloroethane (TCA), cis 1,2 dichlorothene (DCE) and vinyl chloride. Sufficient samples were collected to the west, beneath the building, to locate what was believed to be the western edge of the hot spot which was within approximately 50 feet of the building's eastern side.

In consultation with NYSDEC, a work plan to inject Hydrogen Release Compound® (HRC) at select locations within the site was submitted by Energy*Solutions* on September 27, 2007 (Ref. No. 1.1.10), and subsequently

approved by NYSDEC on November 14, 2007 (Ref. No. 1.1.11). HRC injection was used to reduce chlorinated VOC contaminant concentrations in groundwater in addition to a reduction of the VOC concentrations in the soils beneath the main building. In May 2008, Energy*Solutions* completed the implementation of the HRC injection plan, including injections within Area B.

Subsequent quarterly groundwater sampling indicated that VOC concentrations in groundwater had been reduced in Area B (MW-16, MW-16A, MW-24 and MW-24A). However, the source of the continuing concentrations of TCE observed in the shallow unconsolidated aquifer at the southeast corner of the building in MW-6 was still unclear.

Energy*Solutions* proposed additional groundwater investigation within the portion of the building west and south of MW-24 and MW-24A to determine the extent of the elevated concentrations of VOCs in groundwater generated by the former drywell located outside the main facility loading dock (Ref. No. 1.1.1). All samples collected during the investigation (INT-1 through INT-5 and EXT-1) were collected as grab samples from temporary wells; permanent wells were not installed.

The proposed sampling locations were chosen based on the direction of groundwater flow as observed during times when groundwater was not influenced by pumping well MW-16A. Flow direction in the area is generally to the southwest beneath the building. Two groundwater samples were collected at distances of 50 feet and 150 feet down gradient (i.e., southwest) from the MW-24 well pair. An additional four (4) locations were proposed to the southeast of the MW-24 well pair to determine the source of the low concentrations of TCE observed in the shallow unconsolidated aquifer at MW-6. Two groundwater samples were collected in this southeasterly direction, the first approximately 50 feet and the second approximately 150 feet southeast from the MW-24 well pair, and along the eastern edge of the building. The third groundwater sample collected to the southeast was collected near the southeast corner of the building and the fourth was collected outside the southeast corner of the building between the building and the MW-6 well pair.

The groundwater grab samples were collected on June 8, 2011. The six (6) supplemental samples were collected from temporary wells cased with 1" PVC piping and screened at an approximate depth of five to fifteen feet below the building floor, or the ground surface in the case of sample EXT-1. The wells INT-1 through INT-5 were installed on June 7, 2011 and EXT-1 was installed on June 8, 2011. The wells were allowed to equilibrate and then one sample was collected from each of the six temporary wells on June 8, 2011.

Data collected from these supplemental groundwater grab samples indicated that elevated contaminant concentrations were present in the groundwater to the west and south of monitoring well pair MW-24 the most down gradient well pair located within the building footprint as of the date the samples were collected.

TCE concentrations ranged from a low of non-detectable in INT-1 to a high of 82,000 ug/l in INT-2. Cis 1,2 DCE concentrations ranged from a low of non-detectable in INT-1 to a high of 9,100 ug/l in INT-2. Vinyl Chloride concentrations ranged from a low of non-detectable in INT-1, INT-2 and EXT-1 to a high of 140 ug/l in EXT-1.

Based on the June 2011 results, it was apparent that the groundwater plume from the former drywell had migrated to the west as far as location INT-2 and to the south as far as location INT-4. Lower concentrations at location INT-3 suggest that location INT-2 represents the limits to the west of the major elevated VOC concentrations in the groundwater. The data also suggests that the releases from the former drywell have impacted the groundwater to the west approximately 300 feet based on the locations of these two samples (INT-2 and INT-3).

Concentrations of TCE in samples INT-1 and INT-4 collected more directly to the south of the former drywell suggest that the majority of the groundwater flow travels to the west and south. The TCE concentration in INT-1 was non-detect, and the TCE concentration in INT-4 was 830 ug/l. Concentrations in the southern most sampling points INT-5 and EXT-1 were non-quantifiable at 0.36 ug/l (J) and 0.35 ug/l (J) respectively suggesting that the limits of the southern impact of the drywell release is located somewhere between samples INT-4 and INT-5.

The high VOC concentrations detected in some of the groundwater grab samples collected during the June 8, 2011 sampling event, presented the potential for elevated Sub-Slab vapor concentrations to be present beneath the building floor slab. The *Supplemental Sub-Slab Gas Investigation Work Plan*, CS-OP-PN-060, Rev. 0, (Ref. No. 1.1.1), and the second *Supplemental Sub-Slab Gas Investigation Work Plan*, CS-OP-PN-072, Rev. 0, (Ref. No.1.1.2) were implemented in order to confirm whether the Sub-Slab vapors and indoor air contained elevated VOC concentrations, in the various areas of the building.

Samples were collected using Suma Canisters in accordance with these two work plans. Two types of Sub-Slab samples were collected including 30-minute screening samples and 8-hour DOH method compliant samples. Samples were collected from the Sub-Slab vapors under the building floor and also from the indoor air. Results from the September 2011 sampling effort are summarized in the 2011 Annual Report submitted to the NYSDEC in May 2012. Results from the September 2012 effort were submitted to the DEC in February 2013.

Samples collected during the implementation of these two work plans suggested that the extent of the elevated VOC concentrations require further delineation in the main office area on the western side of the building. Results showed that Sub-Slab VOC concentrations immediately to the east and south of the office area were high enough to warrant further investigation. TCE was detected at a concentration of 340 ug/m^3 in sample 014, which was collected from the Sub-Slab vapors immediately to the east of the office area,. TCE was also detected at a concentration of 1,000 ug/m^3 in sample 016, which was collected from the Sub-Slab vapors immediately to the south of the office area,.

The office areas were expected to present unique vapor flow conditions and a potential for vapors to accumulate that would differ from the potential in the main warehouse. These differing conditions include elements such as ceilings (not present in the main warehouse), shorter walls, smaller rooms, less makeup air flow, and the presence of an HVAC system. Additional sampling in the office areas was deemed appropriate based on these factors.

2.0 SCOPE OF WORK

2.1 Additional Groundwater Grab Samples

Four (4) temporary wells were installed within the facility in September 2012 including wells INT-10 thru INT-13. Wells INT-12 and INT-13 were installed in order to provide additional information regarding the northern extent of the groundwater plume generated by the former drywell located outside the main facility loading dock, as well as the continuity of that plume through the area beneath the former open air courtyard in the center of the facility. Temporary wells INT-10 and INT-11 were also installed in order to assess the concentrations of shallow groundwater beneath the former lens finishing and coating areas in the southern portion of the building. Groundwater data from this area will be used to assist in determining whether the Sub-Slab vapor concentrations in the area are more likely caused by volatilization from contaminants in the groundwater, or by surface spills inside the building which may have contaminated the material just beneath the floors.

All four temporary wells were installed using a 1" PVC piping and screened at an approximate depth of five to 15 feet below the building floor. Depth to groundwater is approximately seven feet to nine feet below the floor surface inside the building, or ground surface outside the building. Wells are screened from an approximate depth of five feet to 15 feet across a fine sand unit typically located just above the bedrock surface. Depth to bedrock in the proposed drilling area ranges from approximately 13 feet to 20 feet below ground surface. The well locations are depicted in Figure 3.

Wells INT-12 and INT-13 were sampled in late October 2012; however, wells INT-10 and INT-11 have been dry since installation. It is hopeful that groundwater will be available for sampling in the temporary wells INT-10 and INT-11 when this sampling plan is implemented. If these two wells are still dry at that time period, sampling will occur in the future when water is available.

2.1.1 If water is available, a sample will be collected from well INT-10, which is in the immediate vicinity of former Sub-Slab sample "ss-30min-028." The "ss-30min-028" sample contained elevated concentrations of TCE and CIS 1,2-DCE at 60,000 and 3,400 ug/m^3, respectively. The first groundwater grab sample is located in this area to determine the relationship between the groundwater and the observed elevated soil vapors in the "ss-30min-028" sample collected in September 2011. If the

groundwater VOC concentrations in this area are not elevated, a surface release would likely be the source of the aforementioned elevated Sub-Slab vapors.

2.1.2 The second groundwater sample will be collected from well INT-11 located centrally between the "ss-30min-027" and "ss-30min-008" sample locations. Analysis of the "ss-30min-027" and "ss-30min-008" samples revealed elevated concentrations of TCE at 3,500 and 3,600 ug/m^3 respectively. Well INT-11 is located in this area to determine if elevated VOC concentrations in the Sub-Slab vapors in the area are the result of groundwater contamination or more likely the result of surface spills that have not reached groundwater and exist just below the slab.

2.2 Sub-Slab and Indoor/Ambient Air samples

Sub-Slab and indoor air samples will be collected from locations in the office area on the far western side of the building. Indoor air samples will also be collected from the far northern and southern areas of the building. Proposed locations are included in Figure 3 and Figure 4.

Sampling efforts are currently planned for implementation during the winter heating season in order to provide data representative of the worst case scenarios realized while heating systems are in operation.

2.2.1 Office Area Sampling

Energy*Solutions* plans to collect Sub-Slab and/or indoor ambient air samples at selected locations within the main facility office areas located on the far western side of the building facing Eggert Road. See Figure 4 for sample locations. All samples will be collected in accordance with NYSDOH sampling protocols.

Office area samples will be collected at five locations throughout the office areas. These locations were selected for the collection of 8-hour indoor air and 8-hour Sub-Slab samples based on an analysis of the air handling systems servicing the office area, air flow patterns based on the office area floor plans and locations of air distribution and return vents within the area. Sampling locations were chosen based on the expected operation of the air handling systems, and biased toward those areas where the anticipated air flows would create the worst ambient air conditions (e.g. potentially higher negative pressure within the room). The indoor air sample results will be compared to the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs), as appropriate.

2.2.2 Northern and Southern Building Area Sampling

Past sampling efforts in the far northern and southern areas of the building have been focused on the concentrations of VOCs in the Sub-Slab vapors. Following review of this existing data, collection of additional indoor air data in these areas is appropriate. The samples will also be intended to assess indoor air concentrations above areas of elevated Sub-Slab concentrations in the vicinity of the former Lens cleaning and production areas in the southern portion of the

building. Two samples are proposed for the northern area of the warehouse and three samples are proposed for the southern area of the warehouse. Indoor air samples proposed for these areas are shown on Figure 3.

2.2.3 Sub-Slab Depressurization System (SSDS) Area Sampling

The investigation will also include the collection of four sets of indoor air and subslab samples from the entry way and loading dock areas of the warehouse. All samples will be collected in accordance with NYSDOH sampling protocols. These samples will be collected in order to assess the success of the new SSDS system which was installed in the loading dock area in 2012. Samples will be collected from permanent sampling ports which were installed in the facility floors during the SSDS installation. Sample ports are located adjacent to sample locations which have been sampled in the past, as well as locations radiating out from the draw points. This existing data available from these past sampling efforts will be used as a baseline for comparison purposes. New data collected during this investigation will be compared to this old data in order to determine whether the operation of the SSDS has reduce the VOC concentrations in the subslab or indoor air in the area. Sampling locations are shown on Figure 3 as "SSDS Indoor Air and Sub-Slab Samples".

2.3 Additional Data Gathering

Following review of the existing indoor air and Sub-Slab data, the collection of several alternate types of data will assist in further refining the conceptual model for the potential migration of VOCs within and beneath the building.

2.3.1 Further Assessment of air flow in additional isolated building areas/rooms.

To date, the collection of indoor air and Sub-Slab data has been primarily focused on the areas within and beneath the main warehouse. However, the building also contains some isolated, fully enclosed rooms and office spaces which merit further assessment. These areas include the UPS office in the northern end of the building and the small office area adjacent to the main loading dock in the northeastern corner of the building. Air flow and vapor concentrations may be different than the main warehouse in these enclosed areas.

During the implementation of this sampling plan, field members will observe these closed areas and determine what air handling systems are present, if any. Observations will be recorded in the field book. Additional samples may be collected from these areas if the potential for the concentration of vapors is present, based on these observations.

As an integral part of this assessment, manometers will be used to collect pressure readings inside and outside these closed-off areas. The pressure readings will be used to determine pressure differentials between the main warehouse air and the air in these smaller closed rooms and thereby assess the potential for air to enter the smaller spaces from the main warehouse area.

Pressure differential readings will be collected using a typical manometer capable of reading a pressure differential of approximately 0.001 inches of water column. The manometer will be stationed in the main warehouse, outside the selected room area. The manometer will be equipped with two silicone tubes, one connected to each measurement port. The end of one tube will be placed in the main warehouse area adjacent to the manometer, and the second tube will travel through the isolating wall and the end placed in the isolate room area. Pressure differentials between the main warehouse and the isolated room will be measured and recorded in the field book.

Pressure differential reading will also be recorded in the main office area on the western side of the building, the smaller office area in the northeastern corner of the facility and the UPS room located in the north central portion of the warehouse.

2.3.2 Concrete Floor Sampling

Elevated TCE concentrations are present in the indoor air at a number of locations within the main warehouse. Past manufacturing activities may have released cleaning solvents which could have soaked into the floors in some areas. The presence of VOCs in the concrete floors may be an explanation for the elevated indoor air readings. In order to confirm whether the floors absorbed solvents and are acting as a source of contamination, the sampling effort will include the collection of concrete floor samples.

Samples will be collected from five (5) areas throughout the main warehouse area. These sampling locations will include various areas throughout the building, some areas thought to be contaminated via intrusion from volatilization of groundwater contaminants, and other areas thought to be contaminated via surface spills onto the concrete floor from process operations. Areas that may be contaminated from the groundwater include those areas within the main groundwater plumes in the center of the building downgradient from the original drywell and the suspected releases in the former open courtyard area. Areas with possible contamination by process area spills which may have migrated beneath the floors include the former plating area in the vicinity of sample 8hr-037 in the north central building area, and the former lens coating and lens finishing areas in the southern portion of the building. Samples will also be biased toward locations with high indoor air concentrations.

One of the five (5) samples will be collected from the far western side of the building immediately to the north of the main office area which is expected to be unaffected by VOC releases from the groundwater or from spills in the various production areas. This sample will serve as a background sample which may be used for comparison purposes. Concrete floor sample locations are shown on Figure 3.

2.4 Sample Methodology

2.4.1 Groundwater Sampling

Groundwater sampling of temporary wells INT-10 and INT-11 will be conducted using the Low Flow/Low Stress method described in Energy*Solutions* "Low Flow/Low Stress Groundwater Purging" Standard Operating Procedure (SOP). A peristaltic pump will be used to draw groundwater from the wells. Dedicated tubing and latex gloves will be used for each well to ensure there is no cross contamination between samples.

The field sampling crew will observe and record required groundwater quality measurements until reading have stabilized as required by the sampling method. Once the water quality readings have stabilized, groundwater samples will be collected into laboratory supplied, cleaned glassware and will be submitted to Columbia Analytical Services under chain-of-custody and analyzed for VOCs via EPA Method 8260.

2.4.2 Concrete Sampling

Two different types of concrete sampling techniques will be used in order to ensure that VOCs present in the concrete will be detected, whether they are in the liquid or the vapor phase. In order to assess the presence of VOCs within the concrete, a sample will be collected using a hammer drill. Holes will be advanced into the floor at each of the five (5) sampling locations, and the cuttings from the drill hole will be collected as quickly as possible and placed in EPA Method 5035 VOC vials with method required preservatives. With concrete as the sampled media, low concentration range samples will be preserved with water in lieu of the standard sodium bisulfate preservative which is not appropriate with concrete. Material for these samples will be collected from the drill hole at a depth interval of approximately 0 to 2 inches below the floor surface. Collected material will be submitted to the laboratory for VOC analysis using EPA method 8260.

The second type of sample collected will be analyzed using head space methods. This approach will provide data that will serve as a simulation of any evaporation of VOCs from the floors which may be occurring. Samples will be collected from each of the five sampling locations using a small chisel hammer or hammer drill expected to produce large chips of concrete. Once prepared, the chips of concrete will be placed in sealed sampling jars and then transported to the laboratory. Once at the laboratory, the sample material will be taken immediately from the sample jars and placed in specially designed containers with sampling ports that permit direct injection of the head space gasses from the container into the analytical instrument. Once the chips are in the test containers, vapors within the sample chips will be permitted to evaporate from the concrete for a period of approximately one week. Once the vapors within the container have equilibrated, the head space within the jar will be analyzed using the EPA Method TO-15. Actual sample locations may be altered at the discretion of the field superintendant and/or SamSon.

2.4.3 Air Sampling

The 8-hour Sub-Slab vapor and ambient air samples will be collected in compliance with NYSDOH guidance (Ref. No. 1.1.12) and in accordance with this work plan. Sampling time periods will be as specified herein, and the tracer will be used on the sub-slab 8-hour samples only.

Sub-Slab vapor samples will be collected from the top two-inches of soil or aggregate located immediately below the slab. Sub-Slab vapor samples will not be collected in close proximity to cracks or voids in the slab in order to minimize potential ambient air infiltration. When possible, Sub-Slab and indoor air samples will be collected on different days in order to minimize the potential effect of sub-slab vapors on the indoor air sample as they may escape into the indoor atmosphere when the bore hole is advance through the floor slab. Temporary Sub-Slab vapor probe installations will be constructed by:

1. Drilling a one-inch diameter borehole through the concrete slab using an electric rotary hammer drill,
2. Inserting Teflon™ tubing into the borehole to a maximum of two inches into the sub-slab soil or aggregate,
3. Backfilling the annular space with clean, coarse sand to within approximately one-inch of the top of the floor slab, and
4. Sealing the borehole with non-VOC emitting modeling clay to ensure that the Sub-Slab vapor sample is not diluted with air from within the building.

Samples collected from the area of the SSDS will utilize the permanent sampling ports installed as part of the SSDS work plan whenever possible. These permanent points will be sampled by removing the floor cap, installing a barbed fitting to the vapor point riser, and connecting the fitting to the sample train using Teflon tubing.

Six-liter, laboratory supplied and certified clean SUMMA canisters with 8-hour calibrated regulators will be used for the collection of the nine Sub-Slab samples (five in the office area and four in the SSDS area), and the 14 indoor air samples (five in the office area and five in the main warehouse area and four in the SSD area).

Each air sample collected in the SUMMA canisters will have its serial number and the corresponding regulator's serial number recorded in the field book or the provided sample log sheet from the laboratory in order to track which regulators were used with which canisters. Start and ending times as well as start and ending vacuum readings will also be recorded on these sheets and provided to the lab and to the Project Manager.

For the 8-hour period Sub-Slab samples, a length of Teflon ™ tubing will be connected from the draw point in the floor to a three way "tee." One port will go to a valve that passes through the shroud and will be used to purge and ultimately connect to the photo-ionization detector (PID). The second port will connect with another piece of tubing to the 8-hour regulator that is pre-mounted to the

SUMMA canister under the shroud. The PID will be used to purge three volumes of the tubing and to monitor the Sub-Slab vapor. Following purging activities, helium will be added into the shroud and monitored with a helium detector so that a 30% concentration within the shroud is achieved and maintained. The helium will be monitored from a port in the shroud that is near the floor so that the majority of the shroud is contained at a minimum of 30% helium. The helium detector is also used to purge the sample train to detect any leaks in the sample train. If leaks are detected, the system will be re-evaluated and leaks fixed. Once the leaks have been fixed and the shroud filled and sample train checked for leaks again, the regulator will be opened to allow airflow from the draw point towards the SUMMA canister to collect the vapor sample. The pre-calibrated regulator on the SUMMA canister will restrict flow to allow sample collection over an 8-hour period for these samples that will be ultimately compared to the OSHA PELs. The vacuum in the SUMMA will be observed periodically during the 8-hour sampling event to ensure that a minimum required vacuum is maintained in the canisters.

For the 8-hour ambient air samples, the SUMMA canisters will be placed in close proximity to the corresponding Sub-Slab canister at a "working height," which is usually 3 to 4 feet above the slab where the Sub-Slab sample is being collected. As noted above, when possible, ambient air samples will be collected on a different day at the discretion of the site technician to minimize cross-contamination from the hole through the facility floor.

Final sample locations may be altered at the discretion of the field superintendant and/or Samson.

3.0 QUALITY ASSURANCE SAMPLING

3.1 Groundwater Quality Assurance Sampling

Groundwater Quality Assurance and Quality Control samples will be collected in accordance with Energy*Solutions Quality Assurance and Quality Control* SOP. Specifically, this sampling event will utilize the following three different types QA/QC samples:

1. Field or equipment blanks will be collected at a rate of one (1) for every 20 samples and at least one (1) per sampling event. The equipment blank is intended to assess the success of the decontamination process and is collected after sampling equipment has been cleaned. The field blank matrix will be de-ionized water or distilled water if available. The sample is drawn through the sampling equipment in the same manner as the non-QA/QC samples and submitted for the same analysis.
2. Trip blanks will be utilized at a rate of one (1) trip blank per cooler containing VOC samples. Trip blanks are used to assess the sample container handling process from the project site to the laboratory. These blanks are typically pre-filled by the laboratory and provided at the rate of one (1) trip blank per shipment.

3. The third type of QA/QC sample that will be collected is a duplicate. Duplicates will be collected at a rate of one (1) for every 20 samples collected and at least one (1) per sampling event. Duplicate samples are collected using the same methodology and source as the sample they are duplicating. This sample is collected to assess the ability to replicate results from two samples taken under the same conditions. It is anticipated that the aforementioned groundwater sample collection will be completed in one day following drilling activities; therefore for this sampling event, one (1) trip blank, one (1) equipment blank, and one (1) duplicate will be collected.

3.2 Air Quality Assurance Sampling

Air testing Quality Assurance and Quality Control samples will be collected in accordance with Energy*Solutions Quality Assurance and Quality Control* SOP. Specifically, this Sub-Slab and Indoor/Ambient Air samples and Correlation sampling event will utilize two different types QA/QC samples.

The first sample type is a field or equipment blank that will be collected at a rate of one (1) blank for every 20 samples collected and at least one (1) per sampling event. The equipment blank will be collected using a typical setup of canister and regulator located in an area where VOC contamination is not known to exist (typically outside). This methodology is used to assess the canister and regulators function as well as its cleanliness.

The second QA/QC sample type that will be collected is a duplicate, at a rate of one (1) for every 20 samples collected and at least one (1) per sampling event. The field duplicate will be collected at the same time and location as the actual sample it is duplicating, for example; if an 8-hour helium shrouded sample were to be duplicated for QA/QC purposes, the duplicated sample would need to be taken from the same sample point and under the same helium shroud.

4.0 DATA MANAGEMENT

4.1 Sample Control and Analysis

The sub-slab vapor and indoor air samples collected in the SUMMA canisters will be relinquished under COC to Columbia Analytical Services of Rochester, New York, a NELAP laboratory. All air and head space samples will be analyzed for VOCs using EPA Method TO-15; concrete samples will be analyzed for VOCs using EPA Method 8260.

4.2 Field Data

The field data collected will be managed using forms and/or bound field notebooks. All sample measurements taken during this project will be identified by matrix, type, and location to avoid ambiguity. Field records will include the following minimum information:

- A chronological listing of significant site events and sampling activities;
- Site name, field team members, signature, and date on each page;
- Site conditions, notes or sketches of sampling locations and sample descriptions;
- Sample times; and
- Record of all measurements.

4.3 Laboratory Data

The laboratory will be responsible for maintaining analytical logbooks and laboratory data as well as a sample inventory for submittal to Energy*Solutions*, if requested. Laboratory data will be transcribed onto a computer-based management system. This data will be summarized in a manner that provides efficiency in data reduction, tabulation, and evaluation. Un-consumed sample volume will be maintained by the laboratory for a period of at least 30 days after issuance of the final report to Energy*Solutions* under the conditions prescribed by the appropriate analytical methods for additional analysis, if necessary. Raw data files will be maintained by the laboratory and at a minimum will consist of the following files:

- Project-related plans;
- Project login data;
- Sample identification documents;
- Chain-of-Custody records;
- Project-related correspondence;
- Raw data sheets QC data;
- Copies of all final reports pertaining to the project; and
- Sample preparation records.

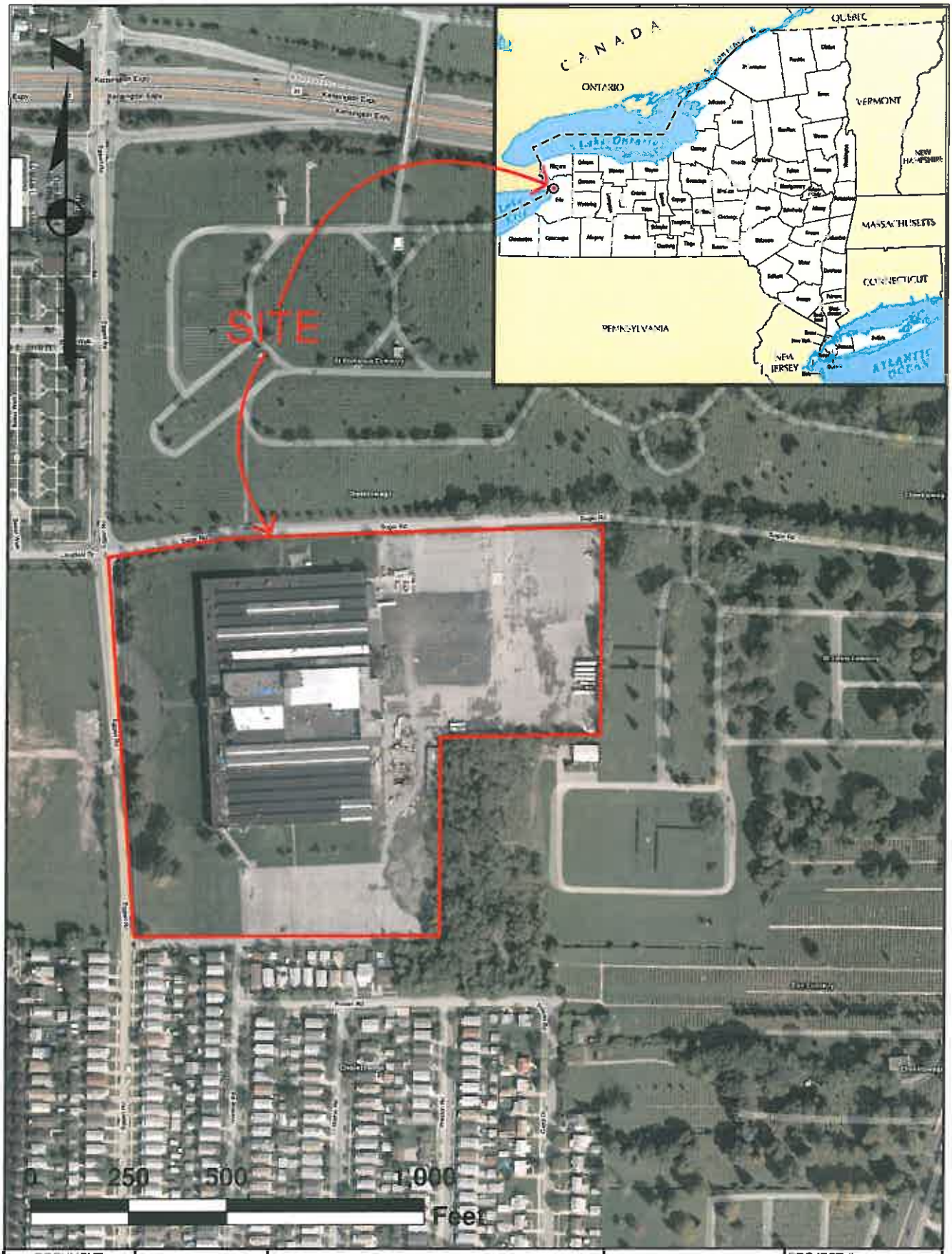
Raw laboratory data files will be retained by the laboratory for a minimum of five (5) years.

4.4 Data Review and Reporting

Sub-Slab vapor data and Groundwater grab data collected during this investigation will be reviewed and plotted on site maps to help delineate VOCs in the underlying groundwater and sub-slab vapor and indoor air. The data from the 8-hour indoor sampling locations will also be compared to the OSHA PELs. The data will be used to determine the extent of the contamination as well as the need for additional permanent groundwater monitoring wells within the building. The data may also be used to determine appropriate locations, if needed, for additional HRC injections to remediate identified groundwater contamination. The 8-hour

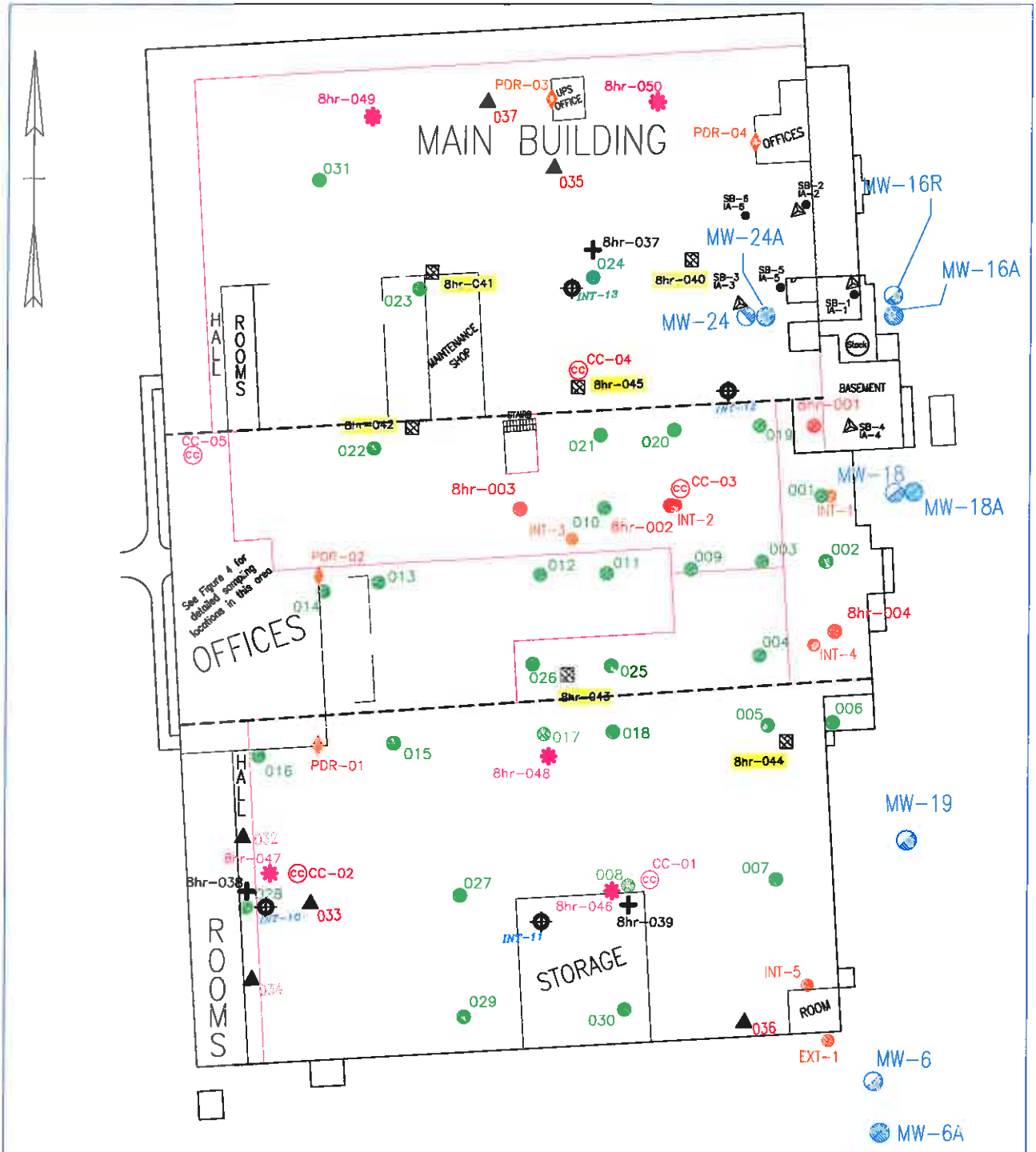
data collected from the areas surrounding the new SSDS will be used for the purpose of comparing the new data with the old data from the area and thereby determining if the SSDS has successfully reduced the VOC concentrations in the area. The data will be summarized and submitted in an annual project status report to NYSDEC.

FIGURES



DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT ROAD CHEEKTOWAGA, NY	ENERGY SOLUTIONS 100 Mill Plain Road Danbury, CT 06811 203-797-8301	PROJECT # 137015
				FILENAME:
REVISION NO.	DRAWING	SITE LOCATION MAP		SCALE: SEE SCALEBAR / DATE: 12/9/09
				BY: MT / CK:
				FIGURE # 1

DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT ROAD CHEEKTOWAGA, NY	ENERGYSOLUTIONS 100 Mill Plain Road Danbury, CT 06811 203-797-8301	PROJECT # 137015
				FILENAME:
REVISION NO.	DRAWING	Site Plan		SCALE: SEE SCALEBAR / DATE: 8/17/10
				BY: MT / CK: RM
				FIGURE # 2



LEGEND

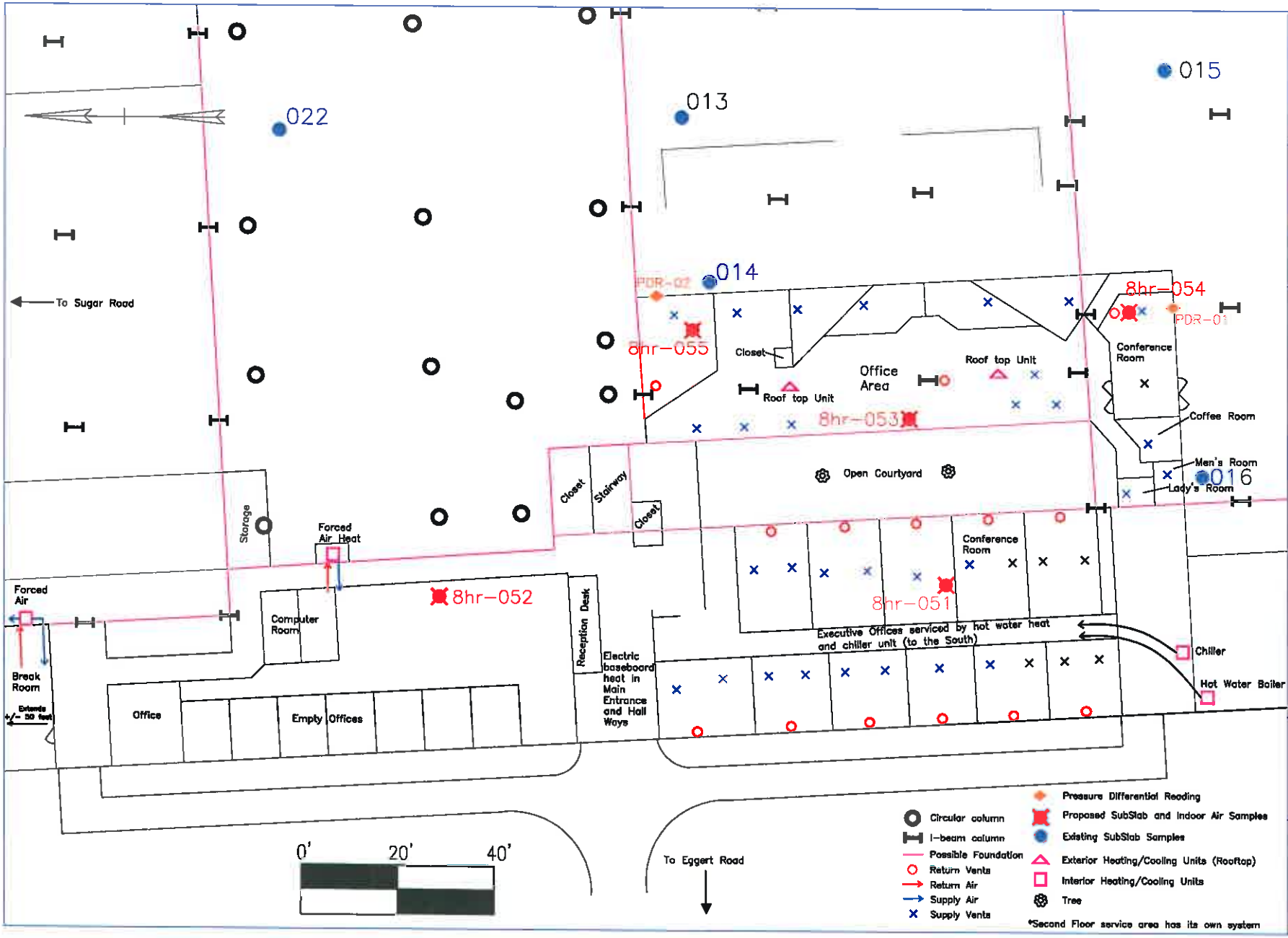
- ✚ 8hr-037 = 8 hour subslab correlation samples (9/2012)
- ▲ 033 = 30-minute Subslab samples (9/2012)
- ⊕ INT-12 = Groundwater grab samples (9/2012)
- ☒ 8hr-C42 = DOH compliant indoor air & subslab samples (9/2012)
- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- 025 = 30 MINUTE SUBSLAB SAMPLES (9/2011)
- 8hr-002 = DOH COMPLIANT INDOOR AIR AND SUBSLAB SAMPLES (9/2011)
- INT-1 = GROUNDWATER GRAB SAMPLES (6/2011)
- SB-4 IA-4 = INDOOR AIR AND SUBSLAB AIR SAMPLES (3/2010)
- Courtyard Foundation
- Possible Foundation
- Non-support Interior Walls

NEW SAMPLE LOCATIONS

- Indoor Air Sample
- CC Concrete Sample
- Pressure Differential Reading
- SB-6 IA-6 SSDS Indoor Air and Subslab Air Samples

Note: INT-10 & INT-11 (previously DRY) will be sampled, if possible

DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC.	ENERGY SOLUTIONS 100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	PROJECT # 137015 FILENAME:
REVISION NO.	DRAWING	Proposed Building-Wide Sampling and Testing Locations		SCALE: See Scalebar DATE: 3/04/13 BY: MT CK: RM FIGURE # 3



PROJECT # 137015
FILENAME:
SCALE: See Scalebar
DATE: 2/4/13
BY: MT
CK: RM
FIGURE # 4

ENERGY SOLUTIONS
100 MILL PLAIN RD
DANBURY, CT. 06811
(203)797-8301

LEICA MICROSYSTEMS INC.
203 EGGERT RD
CHEEKTOWAGA, NY

Office Area
Sampling Locations

PROJECT

DRAWING

DOCUMENT CONTROL NO.

REVISION NO.

APPENDIX C DATA TABLES

Prepared by:REM
Date: 6/26/13
Checked by: MT
Date: 8/23/13

Table 1
Summary of Concrete Chip Sample Data

Sample location	CC-01		CC-02		CC-03		CC-04		CC-05	
Lab ID:	R1302733-001		R1302733-002		R1302733-003		R1302733-004		R1302733-005	
Sample Collection Date:	4/19/2013		4/19/2013		4/19/2013		4/19/2013		4/19/2013	
Analytical Dilution Factor:										
Volatile Organic Compounds (ug/m3) via EPA TO-15										
PROPENE	5	U	56	U	9.9		15		7.1	
ETHANOL	70		560	U	50	U	50	U	50	U
ACETONITRILE	36		56	U	8.2		15		5.4	
ACETONE	220		560	U	530		3200		1000	
2-PROPANOL	50	U	560	U	50	U	64		50	U
METHYLENECHLORIDE	5	U	56	U	5	U	5.7		5	U
CARBON DISULFIDE	50	U	560	U	50	U	58		50	U
2-BUTANONE (MEK)	50	U	560	U	91		840		56	
cis 1,2 DICHLOROETHENE	5	U	61		5	U	5	U	5	U
n-HEXANE	5.5		56	U	130		26		58	
BENZENE	5	U	56	U	18		7.2		11	
CYCLOHEXANE	10	U	110	U	480		14		150	
TRICHLOROETHENE (TCE)	6.4		110		8.6		40		5	U
1,4 DIOXANE	5.4		56	U	5	U	5	U	5	U
n-HEPTANE	12		110		250		40		83	
4-METHYL-2-PENTANONE	5	U	56	U	8.5		78		5	U
TOLUENE	27		74		100		67		38	
2-HEXANONE	21		56	U	5	U	120		5	U
n-OCTANE	23		950		250		30		82	
ETHYLBENZENE	5	U	56	U	27		10		15	
m,p-XYLENES	10	U	210		130		27		62	
STYRENE	5	U	56	U	5	U	6.8		5	U
o-XYLENE	5	U	110		40		12		20	
n-NONANE	18		870		180		220		69	
CUMENE	5	U	56	U	6.8		5	U	5	U
ALPHA-PINENE	5	U	56	U	5	U	120		5	U
n-PROPYLBENZENE	5	U	56	U	9		8.1		5.2	
4-ETHYLTOLUENE	5	U	56	U	5.5		11		5	U
1,3,5 TRIMETHYLBENZENE	5	U	77		18		44		10	
1,2,4 TRIMETHYLBENZENE	5	U	81		33		77		20	
d-LIMONENE	5	U	56	U	5	U	6.6		5	U

NOTES:

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 above Lab MRL

Prepared by:DRS
Date: 6/3/13
Checked by: MT
Date: 8/23/13

Table 2
Summary of Indoor Air Sample Results
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	OSHA PELs ug/m^3	CAS #	AA-8HR-049	AA-8HR-050	AA-8HR-048	AA-8HR-047	AA-8HR-046	IA-8hr-056	IA-1	IA-2	IA-6	IA-8hr-051	IA-8hr-052	IA-8hr-053	IA-8hr-054
Area			Main Warehouse Area						SSDS Area			Main Office Area			
Lab ID:			1301687-001	1301687-002	1301687-003	1301687-004	1301687-005	P1301748-008	1301687-007	1301687-009	1301687-011	1301748-005	1301748-006	1301748-010	1301748-012
Sample Collection Date:			4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/20/2013	4/18/2013	4/18/2013	4/18/2013	4/19/2013	4/19/2013	4/20/2013	4/20/2013
Analytical Dilution Factor:															
Volatile Organic Compounds (ug/m^3)															
Propene	NE	115-07-1	27	16	33	38	31	ND	6.0	44	37	8.9	26	ND	ND
Dichlordiflouromethane (CFC 12)	4,950,000	75-71-8	2.1	2.2	2.0	2.2	2.2	2.7	2.1	2.2	2.2	2.7	2.4	2.3	2.1
Chloromethane	206,503	74-87-3	ND	0.67	ND	ND	ND	0.88	ND	ND	ND	0.83	ND	ND	ND
1,3-Butadiene		106-99-0	1.0	ND	1.1	1.1	1.3	ND	ND	1.2	1.4	ND	1.0	ND	ND
Ethanol	NE	64-17-5	8.5	6.6	ND	ND	28	ND	ND	32	22	99	22	8.7	9.4
Acetonitrile		75-05-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.98	ND	ND	ND
Acetone	2,400,000	67-64-1	15	ND	12	13	ND	14	9.3	ND	ND	47	25	7.9	10
Trichloroflouromethane	5,600,000	75-69-4	1.2	1.2	1.2	1.2	1.2	1.5	1.1	1.3	1.3	1.4	1.2	1.1	1.2
2-Propanol		67-63-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	88	ND	ND	ND
Methylene Chloride	86,851	75-09-2	0.85	ND	1.7	2.6	1.7	5.0	ND	2.7	2.8	1.6	4.6	1.3	1.4
2-Butanone		78-93-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	ND
Ethyl Acetate	49,000 [1]	141-78-6	ND	ND	2.2	2.8	5.8	ND	ND	4.2	5.1	30	2.8	ND	ND
n-Hexane	1,800,000	110-54-3	ND	1.2	ND	ND	ND	ND	ND	1.4	1.5	1.2	2.3	ND	ND
Benzene	3,195	71-43-2	0.89	0.93	0.99	1.1	0.99	ND	ND	1.3	1.3	ND	1.2	ND	ND
Tricholorethene	537,382	79-01-6	1.7	0.76	3.4	4.3	3.1	33	1.2	7.1	8.0	1.1	3.1	1.8	2.0
Methyl Methacrylate	410,000	80-62-6	ND	ND	1.9	2.5	ND	3.4	ND	2.3	2.4	ND	5.5	ND	ND
n-Heptane		142-82-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	1.5	ND	ND
4-Methyl-2-pentanone		108-10-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1	ND	ND	ND
Toluene	75,370 [1]	108-88-3	5.8	6.4	9.2	13	11	6.5	1.3	6.8	7.2	3.9	8.9	2.1	4.3
2-Hexanone		591-78-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND
n-Butyl Acetate	710,000	123-86-4	0.85	ND	1.2	1.5	1.0	1.1	ND	1.3	1.2	0.78	3.5	ND	ND
n-Octane		111-65-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND
Ethylbenzene	435,000	100-41-4	ND	0.7	2.2	3.1	2.7	1.8	ND	2.0	2.1	1.1	3.0	ND	1.4
m,p-Xylenes	435,000	179601-23-1	1.8	2.2	5.2	6.8	6.3	4.6	ND	4.4	4.7	2.2	6.4	ND	3.1
Styrene	425,971	100-42-5	1.5	ND	5.3	7.7	6.4	5.4	ND	3.6	4.1	2.5	10	1.5	3.4
0-Xylene	435,000	95-47-6	ND	0.74	1.7	2.2	2.0	1.6	ND	1.5	1.7	0.84	2.3	ND	1.0
n-Nonane	NE	111-84-2	ND	ND	ND	ND	ND	ND	ND	ND	0.83	ND	ND	ND	ND
alpha-Pinene	NE	80-56-8	4.2	1.6	3	3.7	2.9	4.2	0.94	8.2	9.5	2.7	8.2	0.94	1.3
1,2,4-Trimethylbenzene	NE	95-63-6	ND	0.78	0.75	1.1	ND	ND	ND	1.0	1.1	ND	1.1	ND	ND
d-Limonene	NE	5989-27-5	1.1	1.2	ND	0.86	ND	ND	1.8	0.96	1.2	ND	1.4	3.2	1.5
TOTAL VOCs			73.49	43.18	88.04	108.76	107.59	85.68	23.74	129.46	118.63	318.93	143.4	30.84	42.1

NOTES:
No PEL exceedances
Only chemicals detected are included
1.) ACGIH TLV
B = Analyte detected in method blank
D = Sample reanalyzed and quantified at higher dilution
E = Exceeds calibration range
J = Estimated concentration
ND = Analyte was not detected above Lab MRL

Prepared by:DRS
Date: 6/3/13
Checked by: MT
Date: 8/23/13

Table 2
Summary of Indoor Air Sample Results
Leica Microsystems, Eggert Road
Cheektowaga, NY

Sample location	OSHA PELs ug/m^3	IA-8hr-055	
Area			
Lab ID:		1301748-014	
Sample Collection Date:		4/20/2013	
Analytical Dilution Factor:			
Volatile Organic Compounds (ug/m^3)			
Propene	NE	ND	
Dicholordiflouromethane (CFC 12)	4,950,000	2.3	
Chloromethane	206,503	ND	
1,3-Butadiene		ND	
Ethanol	NE	8	
Acetonitrile		ND	
Acetone	2,400,000	8.4	
Trichloroflouromethane	5,600,000	1.1	
2-Propanol		ND	
Methylene Chloride	86,851	1.2	
2-Butanone		ND	
Ethyl Acetate	49,000 [1]	ND	
n-Hexane	1,800,000	ND	
Benzene	3,195	ND	
Tricholorethene	537,382	1.6	
Methyl Methacrylate	410,000	ND	
n-Heptane		ND	
4-Methyl-2-pentanone		ND	
Toluene	75,370 [1]	2.0	
2-Hexanone		ND	
n-Butyl Acetate	710,000	ND	
n-Octane		ND	
Ethylbenzene	435,000	ND	
m,p-Xylenes	435,000	ND	
Styrene	425,971	1.2	
0-Xylene	435,000	ND	
n-Nonane	NE	ND	
alpha-Pinene	NE	ND	
1,2,4-Trimethylbenzene	NE	ND	
d-Limonene	NE	1.4	
TOTAL VOCs		27.2	

NOTES:
No PEL exceedances
Only chemicals detected are included
1.) ACGIH TLV
B = Analyte detected in method blank
D = Sample reanalyzed and quantified at higher dilution
E = Exceeds calibration range
J = Estimated concentration
ND = Analyte was not detected above Lab MRL

Prepared by: REM
Date: 6/26/13
Checked by: MT
Date: 8/23/13

Table 3
Summary of Sub Slab Sample Results

Sample location	SB-1	SB-2	SB-6	SS-8hr-051	SS-8hr-052	SS-8hr-053	SS-8hr-054	SS-8hr-055
Lab ID:	1301687-006	1301687-008	1301687-010	P1301748-003	P1301748-004	P1301748-009	P1301748-011	P1301748-013
General Area	SSDS Area			Main Office Area				
Sample Collection Date:	4/18/2013	4/18/2013	4/18/2013	4/19/2013	4/19/2013	4/20/2013	4/20/2013	4/20/2013
Analytical Dilution Factor:								
Propene	ND	ND	4.5	8.2	8.8	29	5.5	13
Dicholordiflouromethane (CFC 12)	ND	ND	2.2	1.7	1.8	ND	1.8	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	ND	ND	ND	2.7	2.4	ND	0.93	ND
Chloroethane	ND	ND	1.4	ND	ND	ND	ND	ND
Ethanol	ND	130	ND	45	16	ND	14	81
Acetonitrile	ND	ND	ND	6.7	13	ND	5.7	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND	160
Acetone	ND	160	11	360	230	600	81	360
Trichloroflouromethane	ND	ND	1.5	1.0	ND	ND	1.1	ND
2-Propanol	ND	ND	ND	21	16	ND	ND	ND
1,1-Dicholoroethene	73	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	1.0	ND
Carbon Disulfide	ND	ND	ND	51	18	ND	22	ND
Tricholorotriflouroethane	ND	ND	2.1	ND	ND	ND	ND	ND
2-Butanone (MEK)	ND	ND	ND	51	36	ND	15	ND
cis-1,2-Dicloroethene	25	ND	ND	ND	ND	ND	ND	8.4
n-Hexane	ND	ND	ND	230	130	2200	110	1500
Chloroform	ND	ND	14	ND	ND	ND	ND	ND
Tetrahydrofuran (THF)	ND	ND	ND	ND	1.6	ND	ND	ND
1,1,1-Trichloroethane	430	ND	34	6.3	ND	ND	2.0	55
Benzene	ND	ND	ND	36	35	210	22	120
Carbon Tetrachloride	ND	ND	ND	1.4	ND	ND	ND	ND
Cyclohexane	ND	ND	1.6	86	52	2100	42	1200
Tricholorethene	2700	ND	200	150	22	950	28	120
1,4-Dioxane	150	ND	ND	ND	ND	ND	6.0	ND
n-Heptane	ND	ND	ND	210	130	2300	100	1500
4-Methyl-2-pentanone	ND	ND	ND	4.8	3.8	ND	1.3	45
Toluene	ND	41	2.0	160	130	540	230	390
n-Octane	ND	ND	ND	130	88	1600	84	1600
Tetrachloroethene	ND	ND	1.9	2.8	3.4	ND	2.9	ND
Ethylbenzene	ND	17	ND	7.6	39	100	7.3	31
m,p-Xylenes	ND	26	ND	33	74	320	33	130
Styrene	ND	ND	ND	0.95	2.2	ND	1.5	ND
0-Xylene	ND	ND	ND	12	26	94	12	37
n-Nonane	ND	ND	ND	70	37	560	66	570
Cumene	ND	ND	ND	1.5	290	520	2.0	ND
alpha-Pinene	ND	ND	18	6.3	ND	ND	2.2	18
n-Propylbenzene	ND	ND	ND	1.3	3.9	ND	1.8	ND
4-Ethyltoluene	ND	ND	ND	1.2	2.7	ND	1.9	ND
1,3,5 Trimethylbenzene	ND	ND	ND	3.5	3.6	ND	5.9	ND
1,2,4-Trimethylbenzene	ND	ND	ND	5.0	9.1	ND	11	ND
d-Limonene	ND	150	ND	1.8	160	160	5.0	ND
Naphthalene	ND	ND	ND	ND	2.2	ND	ND	ND
TOTAL VOCs	3378	524	294.2	1709.75	1587.5	12283	925.83	7938.4

Notes
Only chemicals detected are included
B = Analyte detected in method blank
D = Sample reanalyzed and quantified at higher dilution
E = Exceeds calibration range
J = Estimated concentration
ND = Analyte was not detected above Lab MRL

Table 4
Summary of SubSlab Depressurization System Performance Monitoring Data

Sample Location	Chemicals	Sub Slab ug/m^3		Indoor air ug/m3	
		Pre SSDS Baseline (March 10)	*Post SSDS Round 1 (April 13)*	Pre SSDS Baseline (March 10)	*Post SSDS Round 1 (April 13)*
SB-1 (SS compared to IA)	1,1 DCA	25000	73	2.1	ND
	1,2 DCE	6800	25	0.69	ND
	TCA	91000	430	8.2	ND
	Carbon Tet	ND	ND	0.57	ND
	TCE	190000	2700	17	1.3
	PCE	740	ND	0.18	ND
SB-2 (SS compared to IA)	1,1 DCA	1000	ND	0.074	ND
	1,2 DCE	130	ND	0.19	ND
	TCA	1900	ND	0.22	ND
	Carbon Tet	ND	ND	0.57	ND
	TCE	12000	ND	4.4	7.1
	PCE	190	ND	0.27	ND
SB-3 (SS compared to IA)	VC	ND	4.4	ND	ND
	1,1 DCA	14	4.7	0.17	ND
	1,2 DCE	44	280	0.35	ND
	TCA	42	7.6	0.57	ND
	Carbon Tet	ND	ND	0.62	ND
	TCE	260	750	9	3.6
	PCE	36	7.7	0.14	ND
SB-6 compared to (8hr-040)	VC	ND	ND	ND	ND
	1,1 DCA	ND	ND	ND	ND
	1,2 DCE	ND	ND	ND	ND
	TCA	ND	34	ND	ND
	Carbon Tet	ND	ND	0.55	ND
	TCE	380	200	1.3	8
	PCE	37	1.9	ND	ND

Drop in concentration
Increase in concentration

Table 5

Data Summary and Correlation by Area

Former Area	Chemical	Groundwater (ug/l)	SubSlab (ug/m^3)	Concrete Floor (ug/m^3)	Indoor air (ug/m^3)	
Courtyard		**INT-2** (June-11)	**8hr-002** (Sept 11)	**CC-03** (Apr-13)	**8hr-002** (Sept 11)	NA (Only one sample available)
	TCE	82,000	420,000	8.60	19.00	
	DCE	9,100	11,000	ND	0.45	
	1,1 DCA	ND	ND	ND	0.11	
	VC	ND	ND	ND	ND	
	TCA	ND	ND	ND	0.38	
	PCE	160J	ND	ND	0.43	
	Carbon Tet	ND	ND	ND	0.58	
Lens coating		**INT-10** (April-13)	**8hr-038** (Sept 12)	**CC-02** (Apr-13)	**8hr-047** (Apr-13)	NA (Only one sample available)
	TCE	7,500	51,000	110.00	4.30	
	DCE	490	2,900	61.00	ND	
Lens Finishing		**INT-11** (April-13)	**8hr-039** (Sept 12)	**CC-01** (Apr-13)	**8hr-046** (Apr 13)	NA (Only one sample available)
	TCE	66	3,800	6.40	3.10	
	DCE	1,100	240	ND	ND	
	VC	44	ND	ND	ND	
	TCA	ND	150	ND	ND	
	PCE	ND	22	ND	ND	
South of MW24		**INT-12** (April-13)	**8hr-045** (Sept 12)	**CC-04** (Apr-13)	**8hr-056** (Apr 13)	NA (Only one sample available)
	TCE	2,400	36,000	40.00	33.00	21
	1,2 DCE	500	ND	ND	ND	ND
	1,1 DCA	160	ND	ND	ND	ND
	PCE	ND	ND	ND	ND	0.16
	Carbon Tet	ND	ND	ND	ND	0.57
Plating Room		**INT-13** (April-13)	**8hr-045** (Sept 12)	**CC-04** (Apr-13)	**8hr-056** (Apr 13)	**8hr-045** (Sept 12)
	TCE	160	36,000	40.00	33.00	21
	1,2 DCE	38	ND	ND	ND	ND
	1,1 DCA	65	ND	ND	ND	ND
	1,1 DCE	8.6	ND	ND	ND	ND
	1,1,1 TCA	23	ND	ND	ND	ND
	PCE	ND	ND	ND	ND	0.16
	Carbon Tet	ND	ND	ND	ND	0.57

Prepared by: REM
Date: 6/26/13
Checked by: MT
Date: 8/23/13

Table 6
Summary of Groundwater Data
April, 2013

ANALYTE	CAS	RAOs GW	INT-10		INT-10		INT-11		INT-11		INT-12		INT-13	
Sample Collection Date:			4/16/2013		4/16/2013		4/16/2013		4/16/2013		4/16/2013		4/16/2013	
Dilution:			25.00		50.00		5.00		10.00		20.00		1.00	
Volatile Organic Compounds (ug/l)														
acetone	67641	-	250	U	500	U	50	U	100	U	200	U	10	U
benzene	71432	-	130	U	250	U	25	U	50	U	100	U	5.0	U
bromodichloromethane	75274	-	130	U	250	U	25	U	50	U	100	U	5.0	U
bromoform	75252	-	130	U	250	U	25	U	50	U	100	U	5.0	U
bromomethane	74839	-	130	U	250	U	25	U	50	U	100	U	5.0	U
2-butanone (MEK)	78933	-	250	U	500	U	50	U	100	U	200	U	10	U
carbon disulfide	75150	-	250	U	500	U	50	U	100	U	200	U	10	U
carbon tetrachloride	56235	-	130	U	250	U	25	U	50	U	100	U	5.0	U
chlorobenzene	108907	-	130	U	250	U	25	U	50	U	100	U	5.0	U
chloroethane	75003	-	130	U	250	U	25	U	50	U	100	U	5.0	U
chloroform	67663	-	130	U	250	U	25	U	50	U	100	U	5.0	U
chloromethane	74873	-	130	U	250	U	25	U	50	U	100	U	5.0	U
dibromochloromethane	124481	-	130	U	250	U	25	U	50	U	100	U	5.0	U
1,1-dichloroethane	75343	-	130	U	250	U	25	U	50	U	**160**		**65**	
1,2-dichloroethane	107062	-	130	U	250	U	25	U	50	U	100	U	5.0	U
1,1-dichloroethene	75354	-	130	U	250	U	25	U	50	U	100	U	8.6	
cis-1,2-dichloroethene	156592	**5**	**340**		**490**	D	**1300**	E	**1100**	D	**500**		**38**	
trans-1,2-dichloroethene	156605	**5**	130	U	250	U	25	U	50	U	100	U	5.0	U
1,2-dichloropropane	78875	-	130	U	250	U	25	U	50	U	100	U	5.0	U
cis-1,3-dichloropropene	542756	-	130	U	250	U	25	U	50	U	100	U	5.0	U
trans-1,3-dichloropropene	542756	-	130	U	250	U	25	U	50	U	100	U	5.0	U
ethylbenzene	100414	**5**	130	U	250	U	25	U	50	U	100	U	5.0	U
2-hexanone	591786	-	250	U	500	U	50	U	100	U	200	U	10	U
methylene chloride	75092	-	130	U	250	U	25	U	50	U	100	U	5.0	U
4-methyl-2-pentanone (MIBK)	108101	-	250	U	500	U	50	U	100	U	200	U	10	U
styrene	100425	-	130	U	250	U	25	U	50	U	100	U	5.0	U
1,1,2,2-tetrachloroethane	79345	-	130	U	250	U	25	U	50	U	100	U	5.0	U
tetrachloroethene	127184	-	130	U	250	U	25	U	50	U	100	U	5.0	U
toluene	108883	**5**	130	U	250	U	25	U	50	U	100	U	5.0	U
1,1,1-trichloroethane	71556	**5**	130	U	250	U	25	U	50	U	100	U	**23**	
1,1,2-trichloroethane	79005	-	130	U	250	U	25	U	50	U	100	U	5.0	U
trichloroethene	79016	**5**	**5100**	E	**7500**	D	**74**		**66**	D	**2400**		**160**	
vinyl chloride	75014	**5**	130	U	250	U	**44**		50	U	100	U	5.0	U
o-xylene	95476	**5**	130	U	250	U	25	U	50	U	100	U	5.0	U
m+p xylenes	108383/106423	**5**	130	U	250	U	25	U	50	U	100	U	5.0	U

Notes

1.) Bold data indicates RAO exceedance
2.) B = Analyte detected in method blank
3.) D = Sample reanalyzed and quantified at higher dilution
4.) E = Exceeds calibration range
5.) J = Estimated concentration
6.) U = Analyte was not detected above Lab MRL

APPENDIX D LABORATORY DATA

LABORATORY REPORT

June 18, 2013

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

RE: Leica 137015

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on April 19, 2013. For your reference, these analyses have been assigned our service request number R1302733.

The case narrative has been revised to correct the sample preparation conditions.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Aguilera

By Kate Aguilera at 4:55 pm, Jun 18, 2013

Kate Aguilera
Project Manager

Client: Energy Solutions, Inc. Service Request No: R1302733
Project: Leica 137015

CASE NARRATIVE

The samples were received intact under chain of custody on April 19, 2013 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The entire portion of crush concrete was transferred into separate glass purge vessels and allowed to equilibrate at room temperature, 24-25°C, for 1 week. A clean vessel was also set up and run as a Chamber Blank-P130509-CB, under the same set of conditions as the samples.

The headspace of each vessel was flushed with ultra-high purity zero grade air into pre conditioned 1 liter Tedlar bags and analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air pre-concentrator.

The reporting limit is elevated for sample CC-02. The chromatogram indicated the presence of non-target background components. The sample was diluted in order to prevent damage to the instrument and to achieve optimal resolution of the target analyte.

Columbia Analytical Services, Inc. dba ALS Environmental – Simi Valley

Certifications, Accreditations, and Registrations

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L11-203
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2012039
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	494864
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-12-3
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA015272012-2
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.caslab.com, www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

DETAIL SUMMARY REPORT

Client: Energy Solutions, Inc.
Project ID: Leica 137015
Service Request: R1302733

Date Received: 4/19/2013
Time Received: 13:35

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	8260C - VOC FP	TO-15 Modified - VOC
CC-01	R1302733-001	Soil	4/19/2013	10:00	X	X
CC-02	R1302733-002	Soil	4/19/2013	10:20	X	X
CC-03	R1302733-003	Soil	4/19/2013	09:25	X	X
CC-04	R1302733-004	Soil	4/19/2013	09:00	X	X
CC-05	R1302733-005	Soil	4/19/2013	10:50	X	X

Intra-Network Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Karen Bunker

Project Name: Leica 137015
Project Number:
Project Manager: Robert McPeak
Company: Energy Solutions, Inc.

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	VOC TO-15 Modified
R1302733-001	CC-01	1	Soil	4/19/13	1000	4/19/13	SIMIVALLEY	II
R1302733-002	CC-02	↓	Soil	4/19/13	1020	4/19/13	SIMIVALLEY	II
R1302733-003	CC-03	↓	Soil	4/19/13	0925	4/19/13	SIMIVALLEY	II
R1302733-004	CC-04	↓	Soil	4/19/13	0900	4/19/13	SIMIVALLEY	II
R1302733-005	CC-05	↓	Soil	4/19/13	1050	4/19/13	SIMIVALLEY	II

Kate Aguilera

Special Instructions/Comments

Report to Karen.Bunker@als global.com

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

X **STANDARD**

Requested FAX Date: _____

Requested Report Date: ~~05/03/13~~ 5/10/13

Report Requirements

____ I. Results Only

X II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J N

EDD N

Invoice Information

CSOR

3°C Wet Ice

PO# R1302733

Bill to

Relinquished By: [signature] 4/23/13

Received By: [signature] 4/24/13 1010

Airbill Number: _____

Columbia Analytical Services
Now part of the ALS Group
2655 Park Center Drive, Suite A, Simi Valley, CA 93065 | 805.526.7161 | www.caslab.com

Sample Acceptance Check Form

Client: Energy Solutions, Inc. Work order: R1302733
Project: Leica 137015
Sample(s) received on: 4/24/13 Date opened: 4/24/13 by: MZAMORA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by ALS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: 3° C Blank Temperature: ° C **Wet Ice**			
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☒	☐	☐
	Location of seal(s)? Front of cooler, covering opening. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
R1302733-001.04	4oz Glass Jar					
R1302733-002.04	4oz Glass Jar					
R1302733-003.04	4oz Glass Jar					
R1302733-004.04	4oz Glass Jar					
R1302733-005.04	4oz Glass Jar					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-01**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-001

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	**70**	50	**37**	27	
75-05-8	Acetonitrile	**36**	5.0	**22**	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	**220**	50	**91**	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-01**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-001

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	**5.5**	5.0	**1.6**	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	**6.4**	5.0	**1.2**	0.93	
123-91-1	1,4-Dioxane	**5.4**	5.0	**1.5**	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	**12**	5.0	**2.9**	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**27**	5.0	**7.2**	1.3	
591-78-6	2-Hexanone	**21**	5.0	**5.0**	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **CC-01** CAS Sample ID: R1302733-001
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/19/13
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**23**	5.0	**4.9**	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	**18**	5.0	**3.4**	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-02**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-002

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.0090 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	56	ND	32	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	56	ND	11	
74-87-3	Chloromethane	ND	56	ND	27	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	56	ND	8.0	
75-01-4	Vinyl Chloride	ND	56	ND	22	
106-99-0	1,3-Butadiene	ND	56	ND	25	
74-83-9	Bromomethane	ND	56	ND	14	
75-00-3	Chloroethane	ND	56	ND	21	
64-17-5	Ethanol	ND	560	ND	290	
75-05-8	Acetonitrile	ND	56	ND	33	
107-02-8	Acrolein	ND	220	ND	97	
67-64-1	Acetone	ND	560	ND	230	
75-69-4	Trichlorofluoromethane	ND	56	ND	9.9	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	560	ND	230	
107-13-1	Acrylonitrile	ND	56	ND	26	
75-35-4	1,1-Dichloroethene	ND	56	ND	14	
75-09-2	Methylene Chloride	ND	56	ND	16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	56	ND	18	
76-13-1	Trichlorotrifluoroethane	ND	56	ND	7.3	
75-15-0	Carbon Disulfide	ND	560	ND	180	
156-60-5	trans-1,2-Dichloroethene	ND	56	ND	14	
75-34-3	1,1-Dichloroethane	ND	56	ND	14	
1634-04-4	Methyl tert-Butyl Ether	ND	56	ND	15	
108-05-4	Vinyl Acetate	ND	560	ND	160	
78-93-3	2-Butanone (MEK)	ND	560	ND	190	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-02**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-002

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.0090 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**61**	56	**15**	14	
141-78-6	Ethyl Acetate	ND	110	ND	31	
110-54-3	n-Hexane	ND	56	ND	16	
67-66-3	Chloroform	ND	56	ND	11	
109-99-9	Tetrahydrofuran (THF)	ND	56	ND	19	
107-06-2	1,2-Dichloroethane	ND	56	ND	14	
71-55-6	1,1,1-Trichloroethane	ND	56	ND	10	
71-43-2	Benzene	ND	56	ND	17	
56-23-5	Carbon Tetrachloride	ND	56	ND	8.8	
110-82-7	Cyclohexane	ND	110	ND	32	
78-87-5	1,2-Dichloropropane	ND	56	ND	12	
75-27-4	Bromodichloromethane	ND	56	ND	8.3	
79-01-6	Trichloroethene	**110**	56	**21**	10	
123-91-1	1,4-Dioxane	ND	56	ND	15	
80-62-6	Methyl Methacrylate	ND	110	ND	27	
142-82-5	n-Heptane	**110**	56	**28**	14	
10061-01-5	cis-1,3-Dichloropropene	ND	56	ND	12	
108-10-1	4-Methyl-2-pentanone	ND	56	ND	14	
10061-02-6	trans-1,3-Dichloropropene	ND	56	ND	12	
79-00-5	1,1,2-Trichloroethane	ND	56	ND	10	
108-88-3	Toluene	**74**	56	**20**	15	
591-78-6	2-Hexanone	ND	56	ND	14	
124-48-1	Dibromochloromethane	ND	56	ND	6.5	
106-93-4	1,2-Dibromoethane	ND	56	ND	7.2	
123-86-4	n-Butyl Acetate	ND	56	ND	12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **CC-02** CAS Sample ID: R1302733-002
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/19/13
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.0090 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**950**	56	**200**	12	
127-18-4	Tetrachloroethene	ND	56	ND	8.2	
108-90-7	Chlorobenzene	ND	56	ND	12	
100-41-4	Ethylbenzene	ND	56	ND	13	
179601-23-1	m,p-Xylenes	**210**	110	**48**	26	
75-25-2	Bromoform	ND	56	ND	5.4	
100-42-5	Styrene	ND	56	ND	13	
95-47-6	o-Xylene	**110**	56	**26**	13	
111-84-2	n-Nonane	**870**	56	**170**	11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	56	ND	8.1	
98-82-8	Cumene	ND	56	ND	11	
80-56-8	alpha-Pinene	ND	56	ND	10	
103-65-1	n-Propylbenzene	ND	56	ND	11	
622-96-8	4-Ethyltoluene	ND	56	ND	11	
108-67-8	1,3,5-Trimethylbenzene	**77**	56	**16**	11	
95-63-6	1,2,4-Trimethylbenzene	**81**	56	**17**	11	
100-44-7	Benzyl Chloride	ND	56	ND	11	
541-73-1	1,3-Dichlorobenzene	ND	56	ND	9.2	
106-46-7	1,4-Dichlorobenzene	ND	56	ND	9.2	
95-50-1	1,2-Dichlorobenzene	ND	56	ND	9.2	
5989-27-5	d-Limonene	ND	56	ND	10	
96-12-8	1,2-Dibromo-3-chloropropane	ND	56	ND	5.7	
120-82-1	1,2,4-Trichlorobenzene	ND	56	ND	7.5	
91-20-3	Naphthalene	ND	56	ND	11	
87-68-3	Hexachlorobutadiene	ND	56	ND	5.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-03**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-003

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**9.9**	5.0	**5.7**	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	**8.2**	5.0	**4.9**	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	**530**	50	**220**	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	**91**	50	**31**	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-03**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-003

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	**130**	5.0	**38**	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	**18**	5.0	**5.6**	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	**480**	10	**140**	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	**8.6**	5.0	**1.6**	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	**250**	5.0	**60**	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	**8.5**	5.0	**2.1**	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**100**	5.0	**28**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **CC-03** CAS Sample ID: R1302733-003
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/19/13
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**250**	5.0	**54**	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	**27**	5.0	**6.3**	1.2	
179601-23-1	m,p-Xylenes	**130**	10	**31**	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	**40**	5.0	**9.2**	1.2	
111-84-2	n-Nonane	**180**	5.0	**34**	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	**6.8**	5.0	**1.4**	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	**9.0**	5.0	**1.8**	1.0	
622-96-8	4-Ethyltoluene	**5.5**	5.0	**1.1**	1.0	
108-67-8	1,3,5-Trimethylbenzene	**18**	5.0	**3.6**	1.0	
95-63-6	1,2,4-Trimethylbenzene	**33**	5.0	**6.7**	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-04**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-004

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/10/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**15**	5.0	**8.9**	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	**15**	5.0	**8.8**	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	**3,200**	50	**1,300**	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	**64**	50	**26**	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	**5.7**	5.0	**1.7**	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	**58**	50	**19**	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	**840**	50	**290**	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-04**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-004

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/10/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	**26**	5.0	**7.4**	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	**7.2**	5.0	**2.3**	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	**14**	10	**4.0**	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	**40**	5.0	**7.5**	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	**40**	5.0	**9.8**	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	**78**	5.0	**19**	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**67**	5.0	**18**	1.3	
591-78-6	2-Hexanone	**120**	5.0	**29**	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **CC-04** CAS Sample ID: R1302733-004
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/19/13
Analyst: John Rice Date Analyzed: 5/10/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**30**	5.0	**6.4**	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	**10**	5.0	**2.3**	1.2	
179601-23-1	m,p-Xylenes	**27**	10	**6.2**	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	**6.8**	5.0	**1.6**	1.2	
95-47-6	o-Xylene	**12**	5.0	**2.7**	1.2	
111-84-2	n-Nonane	**220**	5.0	**41**	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	**120**	5.0	**21**	0.90	
103-65-1	n-Propylbenzene	**8.1**	5.0	**1.6**	1.0	
622-96-8	4-Ethyltoluene	**11**	5.0	**2.2**	1.0	
108-67-8	1,3,5-Trimethylbenzene	**44**	5.0	**9.0**	1.0	
95-63-6	1,2,4-Trimethylbenzene	**77**	5.0	**16**	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	**6.6**	5.0	**1.2**	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-05**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-005

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**7.1**	5.0	**4.1**	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	**5.4**	5.0	**3.2**	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	**1,000**	50	**440**	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	**56**	50	**19**	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-05**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-005

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	**58**	5.0	**16**	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	**11**	5.0	**3.4**	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	**150**	10	**45**	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	**83**	5.0	**20**	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	**38**	5.0	**10**	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **CC-05** CAS Sample ID: R1302733-005
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/19/13
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**82**	5.0	**18**	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	**15**	5.0	**3.5**	1.2	
179601-23-1	m,p-Xylenes	**62**	10	**14**	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	**20**	5.0	**4.7**	1.2	
111-84-2	n-Nonane	**69**	5.0	**13**	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	**5.2**	5.0	**1.1**	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	**10**	5.0	**2.1**	1.0	
95-63-6	1,2,4-Trimethylbenzene	**20**	5.0	**4.1**	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: P130509-MB

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/9/13
Volume(s) Analyzed: 1.00 Liter(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: R1302733
Client Project ID: **Leica 137015** CAS Sample ID: P130509-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **Method Blank** CAS Sample ID: P130509-MB
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Chamber Blank** CAS Project ID: R1302733
Client Project ID: **Leica 137015** CAS Sample ID: P130509-CB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.0	ND	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.0	ND	1.0	
74-87-3	Chloromethane	ND	5.0	ND	2.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.0	ND	0.72	
75-01-4	Vinyl Chloride	ND	5.0	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.0	ND	2.3	
74-83-9	Bromomethane	ND	5.0	ND	1.3	
75-00-3	Chloroethane	ND	5.0	ND	1.9	
64-17-5	Ethanol	ND	50	ND	27	
75-05-8	Acetonitrile	ND	5.0	ND	3.0	
107-02-8	Acrolein	ND	20	ND	8.7	
67-64-1	Acetone	ND	50	ND	21	
75-69-4	Trichlorofluoromethane	ND	5.0	ND	0.89	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	50	ND	20	
107-13-1	Acrylonitrile	ND	5.0	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	5.0	ND	1.3	
75-09-2	Methylene Chloride	ND	5.0	ND	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	5.0	ND	1.6	
76-13-1	Trichlorotrifluoroethane	ND	5.0	ND	0.65	
75-15-0	Carbon Disulfide	ND	50	ND	16	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.0	ND	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	5.0	ND	1.4	
108-05-4	Vinyl Acetate	ND	50	ND	14	
78-93-3	2-Butanone (MEK)	ND	50	ND	17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Chamber Blank** CAS Project ID: R1302733
Client Project ID: **Leica 137015** CAS Sample ID: P130509-CB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ND	1.3	
141-78-6	Ethyl Acetate	ND	10	ND	2.8	
110-54-3	n-Hexane	ND	5.0	ND	1.4	
67-66-3	Chloroform	ND	5.0	ND	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	5.0	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.0	ND	1.2	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ND	0.92	
71-43-2	Benzene	ND	5.0	ND	1.6	
56-23-5	Carbon Tetrachloride	ND	5.0	ND	0.80	
110-82-7	Cyclohexane	ND	10	ND	2.9	
78-87-5	1,2-Dichloropropane	ND	5.0	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.0	ND	0.75	
79-01-6	Trichloroethene	ND	5.0	ND	0.93	
123-91-1	1,4-Dioxane	ND	5.0	ND	1.4	
80-62-6	Methyl Methacrylate	ND	10	ND	2.4	
142-82-5	n-Heptane	ND	5.0	ND	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.0	ND	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ND	0.92	
108-88-3	Toluene	ND	5.0	ND	1.3	
591-78-6	2-Hexanone	ND	5.0	ND	1.2	
124-48-1	Dibromochloromethane	ND	5.0	ND	0.59	
106-93-4	1,2-Dibromoethane	ND	5.0	ND	0.65	
123-86-4	n-Butyl Acetate	ND	5.0	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: R1302733
Client Sample ID: **Chamber Blank** CAS Sample ID: P130509-CB
Client Project ID: **Leica 137015**

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/9/13
Sample Type: Solid Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	5.0	ND	1.1	
127-18-4	Tetrachloroethene	ND	5.0	ND	0.74	
108-90-7	Chlorobenzene	ND	5.0	ND	1.1	
100-41-4	Ethylbenzene	ND	5.0	ND	1.2	
179601-23-1	m,p-Xylenes	ND	10	ND	2.3	
75-25-2	Bromoform	ND	5.0	ND	0.48	
100-42-5	Styrene	ND	5.0	ND	1.2	
95-47-6	o-Xylene	ND	5.0	ND	1.2	
111-84-2	n-Nonane	ND	5.0	ND	0.95	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ND	0.73	
98-82-8	Cumene	ND	5.0	ND	1.0	
80-56-8	alpha-Pinene	ND	5.0	ND	0.90	
103-65-1	n-Propylbenzene	ND	5.0	ND	1.0	
622-96-8	4-Ethyltoluene	ND	5.0	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ND	1.0	
100-44-7	Benzyl Chloride	ND	5.0	ND	0.97	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ND	0.83	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ND	0.83	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ND	0.83	
5989-27-5	d-Limonene	ND	5.0	ND	0.90	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ND	0.52	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ND	0.67	
91-20-3	Naphthalene	ND	5.0	ND	0.95	
87-68-3	Hexachlorobutadiene	ND	5.0	ND	0.47	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

SURROGATE SPIKE RECOVERY RESULTS

Client: **Energy Solutions, Inc.**
Client Project ID: **Leica 137015** CAS Project ID: R1302733

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 4/19/13
Analyst: John Rice Date(s) Received: 4/19/13
Sample Type: 40 mL Glass Vial(s) Date(s) Analyzed: 5/9 - 5/10/13
Test Notes:

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P130509-MB	**99**	**102**	**100**	70-130	
Lab Control Sample	P130509-LCS	**100**	**101**	**99**	70-130	
Chamber Blank	P130509-CB	**96**	**103**	**102**	70-130	
CC-01	R1302733-001	**98**	**101**	**102**	70-130	
CC-02	R1302733-002	**96**	**97**	**98**	70-130	
CC-03	R1302733-003	**96**	**98**	**100**	70-130	
CC-03	R1302733-003DUP	**97**	**98**	**99**	70-130	
CC-04	R1302733-004	**95**	**101**	**104**	70-130	
CC-05	R1302733-005	**100**	**100**	**99**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: R1302733
Client Project ID: **Leica 137015** CAS Sample ID: P130509-LCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/09/13
Sample Type: Solid Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	204	**231**	**113**	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	202	**202**	**100**	63-115	
74-87-3	Chloromethane	196	**177**	**90**	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	206	**188**	**91**	65-115	
75-01-4	Vinyl Chloride	200	**187**	**94**	64-122	
106-99-0	1,3-Butadiene	210	**215**	**102**	57-141	
74-83-9	Bromomethane	200	**186**	**93**	68-122	
75-00-3	Chloroethane	202	**188**	**93**	66-120	
64-17-5	Ethanol	958	**961**	**100**	58-126	
75-05-8	Acetonitrile	202	**210**	**104**	64-136	
107-02-8	Acrolein	204	**220**	**108**	58-129	
67-64-1	Acetone	1,040	**1000**	**96**	60-114	
75-69-4	Trichlorofluoromethane	210	**180**	**86**	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	396	**374**	**94**	54-118	
107-13-1	Acrylonitrile	206	**250**	**121**	72-143	
75-35-4	1,1-Dichloroethene	218	**211**	**97**	69-119	
75-09-2	Methylene Chloride	212	**202**	**95**	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	214	**228**	**107**	59-131	
76-13-1	Trichlorotrifluoroethane	212	**201**	**95**	69-117	
75-15-0	Carbon Disulfide	208	**203**	**98**	65-115	
156-60-5	trans-1,2-Dichloroethene	202	**204**	**101**	70-126	
75-34-3	1,1-Dichloroethane	206	**201**	**98**	68-116	
1634-04-4	Methyl tert-Butyl Ether	204	**213**	**104**	69-120	
108-05-4	Vinyl Acetate	988	**1150**	**116**	58-160	
78-93-3	2-Butanone (MEK)	212	**251**	**118**	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: R1302733
Client Project ID: **Leica 137015** CAS Sample ID: P130509-LCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/09/13
Sample Type: Solid Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	**213**	**100**	70-119	
141-78-6	Ethyl Acetate	412	**506**	**123**	72-129	
110-54-3	n-Hexane	206	**203**	**99**	63-115	
67-66-3	Chloroform	222	**205**	**92**	68-110	
109-99-9	Tetrahydrofuran (THF)	208	**208**	**100**	60-126	
107-06-2	1,2-Dichloroethane	208	**209**	**100**	69-118	
71-55-6	1,1,1-Trichloroethane	204	**198**	**97**	68-120	
71-43-2	Benzene	208	**191**	**92**	69-117	
56-23-5	Carbon Tetrachloride	212	**217**	**102**	65-134	
110-82-7	Cyclohexane	402	**389**	**97**	69-114	
78-87-5	1,2-Dichloropropane	204	**199**	**98**	70-116	
75-27-4	Bromodichloromethane	204	**207**	**101**	71-126	
79-01-6	Trichloroethene	198	**199**	**101**	71-119	
123-91-1	1,4-Dioxane	206	**242**	**117**	72-126	
80-62-6	Methyl Methacrylate	414	**516**	**125**	75-136	
142-82-5	n-Heptane	202	**199**	**99**	70-117	
10061-01-5	cis-1,3-Dichloropropene	196	**237**	**121**	75-132	
108-10-1	4-Methyl-2-pentanone	210	**233**	**111**	70-133	
10061-02-6	trans-1,3-Dichloropropene	218	**259**	**119**	78-136	
79-00-5	1,1,2-Trichloroethane	202	**201**	**100**	72-119	
108-88-3	Toluene	208	**206**	**99**	65-116	
591-78-6	2-Hexanone	228	**262**	**115**	62-132	
124-48-1	Dibromochloromethane	216	**235**	**109**	66-140	
106-93-4	1,2-Dibromoethane	208	**231**	**111**	69-130	
123-86-4	n-Butyl Acetate	228	**271**	**119**	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: R1302733
Client Project ID: **Leica 137015** CAS Sample ID: P130509-LCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: John Rice Date Analyzed: 5/09/13
Sample Type: Solid Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	206	**211**	**102**	66-118	
127-18-4	Tetrachloroethene	190	**185**	**97**	63-123	
108-90-7	Chlorobenzene	208	**206**	**99**	66-118	
100-41-4	Ethylbenzene	206	**215**	**104**	66-119	
179601-23-1	m,p-Xylenes	412	**402**	**98**	64-118	
75-25-2	Bromoform	216	**231**	**107**	64-140	
100-42-5	Styrene	208	**241**	**116**	68-132	
95-47-6	o-Xylene	200	**202**	**101**	65-120	
111-84-2	n-Nonane	202	**209**	**103**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	198	**201**	**102**	63-128	
98-82-8	Cumene	196	**199**	**102**	65-121	
80-56-8	alpha-Pinene	192	**198**	**103**	66-123	
103-65-1	n-Propylbenzene	198	**205**	**104**	65-121	
622-96-8	4-Ethyltoluene	204	**201**	**99**	64-122	
108-67-8	1,3,5-Trimethylbenzene	208	**203**	**98**	64-125	
95-63-6	1,2,4-Trimethylbenzene	200	**214**	**107**	64-131	
100-44-7	Benzyl Chloride	206	**244**	**118**	67-146	
541-73-1	1,3-Dichlorobenzene	206	**222**	**108**	64-130	
106-46-7	1,4-Dichlorobenzene	212	**206**	**97**	61-124	
95-50-1	1,2-Dichlorobenzene	204	**202**	**99**	63-126	
5989-27-5	d-Limonene	206	**230**	**112**	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	202	**226**	**112**	62-155	
120-82-1	1,2,4-Trichlorobenzene	200	**212**	**106**	59-146	
91-20-3	Naphthalene	178	**193**	**108**	56-143	
87-68-3	Hexachlorobutadiene	208	**199**	**96**	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-03**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-003DUP

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Propene	9.87	5.74	10.2	5.92	10.035	**3**	25	
Dichlorodifluoromethane (CFC 12)	ND	ND	ND	ND	-	-	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
Acetonitrile	8.19	4.88	8.11	4.83	8.15	**1**	25	
Acrolein	ND	ND	ND	ND	-	-	25	
Acetone	534	225	525	221	529.5	**2**	25	
Trichlorofluoromethane	ND	ND	ND	ND	-	-	25	
2-Propanol (Isopropyl Alcohol)	ND	ND	ND	ND	-	-	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	90.8	30.8	90.9	30.8	90.85	**0.1**	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-03**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-003DUP

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Ethyl Acetate	ND	ND	ND	ND	-	-	25	
n-Hexane	133	37.7	131	37.2	132	**2**	25	
Chloroform	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran (THF)	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	17.8	5.56	17.3	5.42	17.55	**3**	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Cyclohexane	476	138	467	136	471.5	**2**	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	8.63	1.61	8.47	1.58	8.55	**2**	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	245	59.9	241	58.9	243	**2**	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	8.48	2.07	9.14	2.23	8.81	**7**	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	104	27.7	103	27.3	103.5	**1**	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Butyl Acetate	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **CC-03**
Client Project ID: **Leica 137015**

CAS Project ID: R1302733
CAS Sample ID: R1302733-003DUP

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: John Rice
Sample Type: Solid
Test Notes:

Date Collected: 4/19/13
Date Received: 4/19/13
Date Analyzed: 5/9/13
Volume(s) Analyzed: 0.10 Liter(s)

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
n-Octane	254	54.4	250	53.5	252	**2**	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	27.5	6.32	26.8	6.17	27.15	**3**	25	
m,p-Xylenes	133	30.7	131	30.1	132	**2**	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	40.2	9.25	40.0	9.20	40.1	**0.5**	25	
n-Nonane	176	33.5	172	32.9	174	**2**	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	6.80	1.38	6.70	1.36	6.75	**1**	25	
alpha-Pinene	ND	ND	ND	ND	-	-	25	
n-Propylbenzene	9.00	1.83	9.02	1.84	9.01	**0.2**	25	
4-Ethyltoluene	5.53	1.13	5.57	1.13	5.55	**0.7**	25	
1,3,5-Trimethylbenzene	17.5	3.57	17.3	3.51	17.4	**1**	25	
1,2,4-Trimethylbenzene	32.7	6.66	32.3	6.56	32.5	**1**	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
d-Limonene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY REPORT

May 7, 2013

Daniel Slywka
Energy Solutions, Inc.
100 Mill Plain Rd. 2nd Floor Mailbox 106
Danbury, CT 06811

RE: Leica / 137015

Dear Daniel:

Enclosed are the results of the samples submitted to our laboratory on April 23, 2013. For your reference, these analyses have been assigned our service request number P1301687.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Aguilera

By Kate Aguilera at 11:17 am, May 07, 2013

Kate Aguilera
Project Manager

Client: Energy Solutions, Inc. Service Request No: P1301687
Project: Leica / 137015

CASE NARRATIVE

The samples were received intact under chain of custody on April 23, 2013 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Helium Analysis

Three of the samples were analyzed for helium according to modified EPA Method 3C (single injection) using a gas chromatograph equipped with a thermal conductivity detector (TCD). This method is not included on the laboratory's NELAP scope of accreditation.

Volatile Organic Compound Analysis

All of the samples were also analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. The method was modified to include the use of nitrogen as a diluent gas in place of zero-grade air for canister pressurization. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP scope of accreditation.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The reporting limit is elevated for sample SB-2. The chromatogram indicated the presence of non-target background components. The sample was diluted in order to prevent damage to the instrument and to achieve optimal resolution of the target analytes.

Columbia Analytical Services, Inc. dba ALS Environmental – Simi Valley

Certifications, Accreditations, and Registrations

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L11-203
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2012039
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	494864
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-12-3
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA015272012-2
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.caslab.com, www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

DETAIL SUMMARY REPORT

Client: Energy Solutions, Inc.
Project ID: Leica / 137015
Service Request: P1301687

Date Received: 4/23/2013
Time Received: 10:20

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans	3C Modified - Helium Can
AA-8hr-049	P1301687-001	Air	4/17/2013	17:10	AC01082	-3.06	3.68	X	
AA-8hr-050	P1301687-002	Air	4/17/2013	17:00	AS00127	0.61	3.81	X	
AA-8hr-048	P1301687-003	Air	4/17/2013	17:10	AC01617	-2.39	3.64	X	
AA-8hr-047	P1301687-004	Air	4/17/2013	17:15	AC01110	-2.29	3.60	X	
AA-8hr-046	P1301687-005	Air	4/17/2013	17:10	AC01163	-4.92	3.73	X	
SB-1	P1301687-006	Air	4/18/2013	16:00	AC01131	-5.68	3.44	X	X
IA-1	P1301687-007	Air	4/18/2013	16:00	AC01013	-2.30	3.67	X	
SB-2	P1301687-008	Air	4/18/2013	16:20	AC01482	-9.52	3.49	X	X
IA-2	P1301687-009	Air	4/18/2013	16:20	AC01284	-3.58	3.72	X	
SB-6	P1301687-010	Air	4/18/2013	16:15	AC01580	-3.52	3.55	X	X
IA-6	P1301687-011	Air	4/18/2013	16:15	AC01049	-3.07	3.66	X	

Columbia Analytical Services™
2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

CAS Project No. P1301687

Company Name & Address (Reporting Information)
ENERGY SOLUTIONS
100 MILL PLAIN RD
DANBURY CT 06811

Project Name: Leica
Project Number: 137015
P.O. # / Billing Information

CAS Contact: K. Aguilera

Project Manager: Bob McPeak
Phone: 801 303 1092
Fax:
Email Address for Result Reporting: RMcPeak@Energysolutions.com
Sampler (Print & Sign): DAN SLYWKA

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15	Analysis Method: He	Comments e.g. Actual Preservative or specific instructions
AA-8hr-049	1 -3.11	4/17/13	0900 / 1710	AC01082	FC00012	26.5	13.5	6L	X		
AA-8hr-050	2 -4.56	4/17/13	0900 / 1700	AS00127	FC00052	27.5	6.0	6L	X		
AA-8hr-048	3 -2.44	4/17/13	0910 / 1710	AC01617	FC00113	28.0	6.0	6L	X		
AA-8hr-047	4 -2.32	4/17/13	0915 / 1715	AC01110	FCA00342	30.0	5.5	6L	X		
AA-8hr-046	5 -4.97	4/17/13	0910 / 1710	AC01163	FCA00094	28.0	10.0	6L	X		
SB-1	6 -5.63	4/18/13	0815 / 1600	AC01131	FCA00076	26.5	9.5	6L	X	X	
IA-1	7 -2.35	4/18/13	0815 / 1600	AC01013	FCA00445	29.0	4.0	6L	X		
SB-2	8 -9.58	4/18/13	0825 / 1620	AC01482	FCA00608	30.5	20.0	6L	X	X	? END pressure
IA-2	9 -3.63	4/18/13	0825 / 1620	AC01284	FCA00264	29.75	7.0	6L	X		
SB-6	10 -3.49	4/18/13	0820 / 1615	AC01580	FCA00386	29.0	5.5	6L	X	X	
IA-6	11 -3.11	4/18/13	0820 / 1615	AC01049	FCA00021	29.0	7.0	6L	X		

5 of 65

Report Tier Levels - please select
Tier I - Results (Default if not specified) _____
Tier II (Results + QC Summaries) _____
Tier III (Results + QC & Calibration Summaries) _____
Tier IV (Data Validation Package) 10% Surcharge _____

EDD required (Yes) / No
Type: NY DEC

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	4/18/13	1200		4/19/13	1200
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	4/19/13	1335		4/23/13	1020

Cooler / Blank Temperature ____°C

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Sample Acceptance Check Form

Client: Energy Solutions, Inc. Work order: P1301687

Project: Leica / 137015

Sample(s) received on: 4/23/13 Date opened: 4/23/13 by: RMARTENIES

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by ALS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1301687-001.01	6.0 L Ambient Can					
P1301687-002.01	6.0 L Silonite Can					
P1301687-003.01	6.0 L Ambient Can					
P1301687-004.01	6.0 L Ambient Can					
P1301687-005.01	6.0 L Ambient Can					
P1301687-006.01	6.0 L Ambient Can					
P1301687-007.01	6.0 L Ambient Can					
P1301687-008.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

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Sample Acceptance Check Form

Client: Energy Solutions, Inc. Work order: P1301687

Project: Leica / 137015

Sample(s) received on: 4/23/13 Date opened: 4/23/13 by: RMARTENIES

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1301687-009.01	6.0 L Ambient Can					
P1301687-010.01	6.0 L Ambient Can					
P1301687-011.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Project ID: **Leica / 137015** CAS Project ID: P1301687

Helium

Test Code: EPA 3C Modified
Instrument ID: HP5890 II/GC8/TCD Date(s) Collected: 4/18/13
Analyst: Jennifer Young Date Received: 4/23/13
Sample Type: 6.0 L Summa Canister(s) Date Analyzed: 4/27/13
Test Notes:

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SB-1	P1301687-006	1.00	2.01	**3,600**	50	
SB-2	P1301687-008	1.00	3.51	**4,900**	88	
SB-6	P1301687-010	1.00	1.63	**6,400**	41	
Method Blank	P130427-MB	1.00	1.00	ND	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130427-LCS

Test Code: EPA 3C Modified Date Collected: NA
Instrument ID: HP5890 II/GC8/TCD Date Received: NA
Analyst: Jennifer Young Date Analyzed: 4/27/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppmV	**Result ppmV**	**% Recovery**	CAS Acceptance Limits	Data Qualifier
7440-59-7	Helium	10,000	**11,200**	**112**	70-127	

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-6**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-010DUP

Test Code: EPA 3C Modified
Instrument ID: HP5890 II/GC8/TCD
Analyst: Jennifer Young
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01580

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/27/13
Volume(s) Analyzed: 1.00 ml(s)

Initial Pressure (psig): -3.52 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.63

CAS #	Compound	Sample Result ppmV	Duplicate Sample Result ppmV	Average	% RPD	RPD Limit	Data Qualifier
7440-59-7	Helium	**6,440**	**6,360**	6400	**1**	23	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-049**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01082

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/29/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.06 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**27**	0.79	**15**	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.79	**0.43**	0.16	
74-87-3	Chloromethane	ND	0.79	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.79	ND	0.31	
106-99-0	1,3-Butadiene	**1.0**	0.79	**0.46**	0.36	
74-83-9	Bromomethane	ND	0.79	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	**8.5**	7.9	**4.5**	4.2	
75-05-8	Acetonitrile	ND	0.79	ND	0.47	
107-02-8	Acrolein	ND	3.2	ND	1.4	
67-64-1	Acetone	**15**	7.9	**6.2**	3.3	
75-69-4	Trichlorofluoromethane	**1.2**	0.79	**0.22**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.9	ND	3.2	
107-13-1	Acrylonitrile	ND	0.79	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.79	ND	0.20	
75-09-2	Methylene Chloride	**0.85**	0.79	**0.25**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.79	ND	0.25	
76-13-1	Trichlorotrifluoroethane	ND	0.79	ND	0.10	
75-15-0	Carbon Disulfide	ND	7.9	ND	2.5	
156-60-5	trans-1,2-Dichloroethene	ND	0.79	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.79	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.9	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	7.9	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-049**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01082

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/29/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.06 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.79	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.44	
110-54-3	n-Hexane	ND	0.79	ND	0.22	
67-66-3	Chloroform	ND	0.79	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.79	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.79	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.79	ND	0.14	
71-43-2	Benzene	**0.89**	0.79	**0.28**	0.25	
56-23-5	Carbon Tetrachloride	ND	0.79	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.79	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.79	ND	0.12	
79-01-6	Trichloroethene	**1.7**	0.79	**0.31**	0.15	
123-91-1	1,4-Dioxane	ND	0.79	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.39	
142-82-5	n-Heptane	ND	0.79	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.79	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.79	ND	0.14	
108-88-3	Toluene	**5.8**	0.79	**1.5**	0.21	
591-78-6	2-Hexanone	ND	0.79	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.79	ND	0.093	
106-93-4	1,2-Dibromoethane	ND	0.79	ND	0.10	
123-86-4	n-Butyl Acetate	**0.85**	0.79	**0.18**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **AA-8hr-049** CAS Sample ID: P1301687-001
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/17/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01082

Initial Pressure (psig): -3.06 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.79	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.79	ND	0.12	
108-90-7	Chlorobenzene	ND	0.79	ND	0.17	
100-41-4	Ethylbenzene	ND	0.79	ND	0.18	
179601-23-1	m,p-Xylenes	**1.8**	1.6	**0.42**	0.36	
75-25-2	Bromoform	ND	0.79	ND	0.076	
100-42-5	Styrene	**1.5**	0.79	**0.34**	0.19	
95-47-6	o-Xylene	ND	0.79	ND	0.18	
111-84-2	n-Nonane	ND	0.79	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.79	ND	0.12	
98-82-8	Cumene	ND	0.79	ND	0.16	
80-56-8	alpha-Pinene	**4.2**	0.79	**0.76**	0.14	
103-65-1	n-Propylbenzene	ND	0.79	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.79	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.79	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.79	ND	0.16	
100-44-7	Benzyl Chloride	ND	0.79	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.79	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.79	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.79	ND	0.13	
5989-27-5	d-Limonene	**1.1**	0.79	**0.20**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	ND	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	0.79	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.79	ND	0.074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-050**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AS00127

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/29/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.61 Final Pressure (psig): 3.81

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**16**	0.61	**9.2**	0.35	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.61	**0.44**	0.12	
74-87-3	Chloromethane	**0.67**	0.61	**0.32**	0.29	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.61	ND	0.087	
75-01-4	Vinyl Chloride	ND	0.61	ND	0.24	
106-99-0	1,3-Butadiene	ND	0.61	ND	0.27	
74-83-9	Bromomethane	ND	0.61	ND	0.16	
75-00-3	Chloroethane	ND	0.61	ND	0.23	
64-17-5	Ethanol	**6.6**	6.1	**3.5**	3.2	
75-05-8	Acetonitrile	ND	0.61	ND	0.36	
107-02-8	Acrolein	ND	2.4	ND	1.1	
67-64-1	Acetone	ND	6.1	ND	2.5	
75-69-4	Trichlorofluoromethane	**1.2**	0.61	**0.22**	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.1	ND	2.5	
107-13-1	Acrylonitrile	ND	0.61	ND	0.28	
75-35-4	1,1-Dichloroethene	ND	0.61	ND	0.15	
75-09-2	Methylene Chloride	ND	0.61	ND	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.61	ND	0.19	
76-13-1	Trichlorotrifluoroethane	ND	0.61	ND	0.079	
75-15-0	Carbon Disulfide	ND	6.1	ND	1.9	
156-60-5	trans-1,2-Dichloroethene	ND	0.61	ND	0.15	
75-34-3	1,1-Dichloroethane	ND	0.61	ND	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	0.61	ND	0.17	
108-05-4	Vinyl Acetate	ND	6.1	ND	1.7	
78-93-3	2-Butanone (MEK)	ND	6.1	ND	2.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-050**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AS00127

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/29/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.61 Final Pressure (psig): 3.81

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.61	ND	0.15	
141-78-6	Ethyl Acetate	ND	1.2	ND	0.34	
110-54-3	n-Hexane	**1.2**	0.61	**0.34**	0.17	
67-66-3	Chloroform	ND	0.61	ND	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	0.61	ND	0.21	
107-06-2	1,2-Dichloroethane	ND	0.61	ND	0.15	
71-55-6	1,1,1-Trichloroethane	ND	0.61	ND	0.11	
71-43-2	Benzene	**0.93**	0.61	**0.29**	0.19	
56-23-5	Carbon Tetrachloride	ND	0.61	ND	0.096	
110-82-7	Cyclohexane	ND	1.2	ND	0.35	
78-87-5	1,2-Dichloropropane	ND	0.61	ND	0.13	
75-27-4	Bromodichloromethane	ND	0.61	ND	0.090	
79-01-6	Trichloroethene	**0.76**	0.61	**0.14**	0.11	
123-91-1	1,4-Dioxane	ND	0.61	ND	0.17	
80-62-6	Methyl Methacrylate	ND	1.2	ND	0.30	
142-82-5	n-Heptane	ND	0.61	ND	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.61	ND	0.13	
108-10-1	4-Methyl-2-pentanone	ND	0.61	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.61	ND	0.13	
79-00-5	1,1,2-Trichloroethane	ND	0.61	ND	0.11	
108-88-3	Toluene	**6.4**	0.61	**1.7**	0.16	
591-78-6	2-Hexanone	ND	0.61	ND	0.15	
124-48-1	Dibromochloromethane	ND	0.61	ND	0.071	
106-93-4	1,2-Dibromoethane	ND	0.61	ND	0.079	
123-86-4	n-Butyl Acetate	ND	0.61	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **AA-8hr-050** CAS Sample ID: P1301687-002
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/17/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00127

Initial Pressure (psig): 0.61 Final Pressure (psig): 3.81

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.61	ND	0.13	
127-18-4	Tetrachloroethene	ND	0.61	ND	0.089	
108-90-7	Chlorobenzene	ND	0.61	ND	0.13	
100-41-4	Ethylbenzene	**0.70**	0.61	**0.16**	0.14	
179601-23-1	m,p-Xylenes	**2.2**	1.2	**0.51**	0.28	
75-25-2	Bromoform	ND	0.61	ND	0.059	
100-42-5	Styrene	ND	0.61	ND	0.14	
95-47-6	o-Xylene	**0.74**	0.61	**0.17**	0.14	
111-84-2	n-Nonane	ND	0.61	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.61	ND	0.088	
98-82-8	Cumene	ND	0.61	ND	0.12	
80-56-8	alpha-Pinene	**1.6**	0.61	**0.28**	0.11	
103-65-1	n-Propylbenzene	ND	0.61	ND	0.12	
622-96-8	4-Ethyltoluene	ND	0.61	ND	0.12	
108-67-8	1,3,5-Trimethylbenzene	ND	0.61	ND	0.12	
95-63-6	1,2,4-Trimethylbenzene	**0.78**	0.61	**0.16**	0.12	
100-44-7	Benzyl Chloride	ND	0.61	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.61	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	0.61	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	0.61	ND	0.10	
5989-27-5	d-Limonene	**1.2**	0.61	**0.21**	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.61	ND	0.063	
120-82-1	1,2,4-Trichlorobenzene	ND	0.61	ND	0.082	
91-20-3	Naphthalene	ND	0.61	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.61	ND	0.057	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-048**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01617

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.39 Final Pressure (psig): 3.64

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**33**	0.75	**19**	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.75	**0.41**	0.15	
74-87-3	Chloromethane	ND	0.75	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.75	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.75	ND	0.29	
106-99-0	1,3-Butadiene	**1.1**	0.75	**0.49**	0.34	
74-83-9	Bromomethane	ND	0.75	ND	0.19	
75-00-3	Chloroethane	ND	0.75	ND	0.28	
64-17-5	Ethanol	ND	7.5	ND	4.0	
75-05-8	Acetonitrile	ND	0.75	ND	0.44	
107-02-8	Acrolein	ND	3.0	ND	1.3	
67-64-1	Acetone	**12**	7.5	**5.1**	3.1	
75-69-4	Trichlorofluoromethane	**1.2**	0.75	**0.21**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.5	ND	3.0	
107-13-1	Acrylonitrile	ND	0.75	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.75	ND	0.19	
75-09-2	Methylene Chloride	**1.7**	0.75	**0.49**	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.75	ND	0.24	
76-13-1	Trichlorotrifluoroethane	ND	0.75	ND	0.097	
75-15-0	Carbon Disulfide	ND	7.5	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.75	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.75	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.75	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.5	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	7.5	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-048**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01617

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.39 Final Pressure (psig): 3.64

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.75	ND	0.19	
141-78-6	Ethyl Acetate	**2.2**	1.5	**0.62**	0.41	
110-54-3	n-Hexane	ND	0.75	ND	0.21	
67-66-3	Chloroform	ND	0.75	ND	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	0.75	ND	0.25	
107-06-2	1,2-Dichloroethane	ND	0.75	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.75	ND	0.14	
71-43-2	Benzene	**0.99**	0.75	**0.31**	0.23	
56-23-5	Carbon Tetrachloride	ND	0.75	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.75	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.75	ND	0.11	
79-01-6	Trichloroethene	**3.4**	0.75	**0.63**	0.14	
123-91-1	1,4-Dioxane	ND	0.75	ND	0.21	
80-62-6	Methyl Methacrylate	**1.9**	1.5	**0.45**	0.36	
142-82-5	n-Heptane	ND	0.75	ND	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.75	ND	0.16	
108-10-1	4-Methyl-2-pentanone	ND	0.75	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.75	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.75	ND	0.14	
108-88-3	Toluene	**9.2**	0.75	**2.4**	0.20	
591-78-6	2-Hexanone	ND	0.75	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.75	ND	0.087	
106-93-4	1,2-Dibromoethane	ND	0.75	ND	0.097	
123-86-4	n-Butyl Acetate	**1.2**	0.75	**0.26**	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **AA-8hr-048** CAS Sample ID: P1301687-003
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/17/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01617

Initial Pressure (psig): -2.39 Final Pressure (psig): 3.64

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.75	ND	0.16	
127-18-4	Tetrachloroethene	ND	0.75	ND	0.11	
108-90-7	Chlorobenzene	ND	0.75	ND	0.16	
100-41-4	Ethylbenzene	**2.2**	0.75	**0.51**	0.17	
179601-23-1	m,p-Xylenes	**5.2**	1.5	**1.2**	0.34	
75-25-2	Bromoform	ND	0.75	ND	0.072	
100-42-5	Styrene	**5.3**	0.75	**1.2**	0.18	
95-47-6	o-Xylene	**1.7**	0.75	**0.38**	0.17	
111-84-2	n-Nonane	ND	0.75	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.75	ND	0.11	
98-82-8	Cumene	ND	0.75	ND	0.15	
80-56-8	alpha-Pinene	**3.0**	0.75	**0.54**	0.13	
103-65-1	n-Propylbenzene	ND	0.75	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.75	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.75	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	**0.75**	0.75	**0.15**	0.15	
100-44-7	Benzyl Chloride	ND	0.75	ND	0.14	
541-73-1	1,3-Dichlorobenzene	ND	0.75	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.75	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.75	ND	0.12	
5989-27-5	d-Limonene	ND	0.75	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.75	ND	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	0.75	ND	0.10	
91-20-3	Naphthalene	ND	0.75	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.75	ND	0.070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-047**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01110

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/29/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.29 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**38**	0.74	**22**	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.74	**0.44**	0.15	
74-87-3	Chloromethane	ND	0.74	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.74	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.74	ND	0.29	
106-99-0	1,3-Butadiene	**1.1**	0.74	**0.50**	0.33	
74-83-9	Bromomethane	ND	0.74	ND	0.19	
75-00-3	Chloroethane	ND	0.74	ND	0.28	
64-17-5	Ethanol	ND	7.4	ND	3.9	
75-05-8	Acetonitrile	ND	0.74	ND	0.44	
107-02-8	Acrolein	ND	2.9	ND	1.3	
67-64-1	Acetone	**13**	7.4	**5.6**	3.1	
75-69-4	Trichlorofluoromethane	**1.2**	0.74	**0.22**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.4	ND	3.0	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.74	ND	0.19	
75-09-2	Methylene Chloride	**2.6**	0.74	**0.76**	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.74	ND	0.23	
76-13-1	Trichlorotrifluoroethane	ND	0.74	ND	0.096	
75-15-0	Carbon Disulfide	ND	7.4	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.74	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.74	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.74	ND	0.20	
108-05-4	Vinyl Acetate	ND	7.4	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	7.4	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-047** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P1301687-004

Test Code: EPA TO-15 Date Collected: 4/17/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01110

Initial Pressure (psig): -2.29 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.74	ND	0.19	
141-78-6	Ethyl Acetate	**2.8**	1.5	**0.77**	0.41	
110-54-3	n-Hexane	ND	0.74	ND	0.21	
67-66-3	Chloroform	ND	0.74	ND	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	0.74	ND	0.25	
107-06-2	1,2-Dichloroethane	ND	0.74	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.74	ND	0.13	
71-43-2	Benzene	**1.1**	0.74	**0.36**	0.23	
56-23-5	Carbon Tetrachloride	ND	0.74	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.74	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.74	ND	0.11	
79-01-6	Trichloroethene	**4.3**	0.74	**0.80**	0.14	
123-91-1	1,4-Dioxane	ND	0.74	ND	0.20	
80-62-6	Methyl Methacrylate	**2.5**	1.5	**0.61**	0.36	
142-82-5	n-Heptane	ND	0.74	ND	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.74	ND	0.16	
108-10-1	4-Methyl-2-pentanone	ND	0.74	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.74	ND	0.13	
108-88-3	Toluene	**13**	0.74	**3.4**	0.20	
591-78-6	2-Hexanone	ND	0.74	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.74	ND	0.086	
106-93-4	1,2-Dibromoethane	ND	0.74	ND	0.096	
123-86-4	n-Butyl Acetate	**1.5**	0.74	**0.32**	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **AA-8hr-047** CAS Sample ID: P1301687-004
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/17/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01110

Initial Pressure (psig): -2.29 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.74	ND	0.16	
127-18-4	Tetrachloroethene	ND	0.74	ND	0.11	
108-90-7	Chlorobenzene	ND	0.74	ND	0.16	
100-41-4	Ethylbenzene	**3.1**	0.74	**0.71**	0.17	
179601-23-1	m,p-Xylenes	**6.8**	1.5	**1.6**	0.34	
75-25-2	Bromoform	ND	0.74	ND	0.071	
100-42-5	Styrene	**7.7**	0.74	**1.8**	0.17	
95-47-6	o-Xylene	**2.2**	0.74	**0.50**	0.17	
111-84-2	n-Nonane	ND	0.74	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.74	ND	0.11	
98-82-8	Cumene	ND	0.74	ND	0.15	
80-56-8	alpha-Pinene	**3.7**	0.74	**0.67**	0.13	
103-65-1	n-Propylbenzene	ND	0.74	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.74	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.74	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	**1.1**	0.74	**0.22**	0.15	
100-44-7	Benzyl Chloride	ND	0.74	ND	0.14	
541-73-1	1,3-Dichlorobenzene	ND	0.74	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.74	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.74	ND	0.12	
5989-27-5	d-Limonene	**0.86**	0.74	**0.15**	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	0.74	ND	0.099	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.74	ND	0.069	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-046**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01163

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.92 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.88

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**31**	0.94	**18**	0.55	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.94	**0.44**	0.19	
74-87-3	Chloromethane	ND	0.94	ND	0.46	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.94	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.94	ND	0.37	
106-99-0	1,3-Butadiene	**1.3**	0.94	**0.60**	0.43	
74-83-9	Bromomethane	ND	0.94	ND	0.24	
75-00-3	Chloroethane	ND	0.94	ND	0.36	
64-17-5	Ethanol	**28**	9.4	**15**	5.0	
75-05-8	Acetonitrile	ND	0.94	ND	0.56	
107-02-8	Acrolein	ND	3.8	ND	1.6	
67-64-1	Acetone	ND	9.4	ND	4.0	
75-69-4	Trichlorofluoromethane	**1.2**	0.94	**0.21**	0.17	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	9.4	ND	3.8	
107-13-1	Acrylonitrile	ND	0.94	ND	0.43	
75-35-4	1,1-Dichloroethene	ND	0.94	ND	0.24	
75-09-2	Methylene Chloride	**1.7**	0.94	**0.49**	0.27	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.94	ND	0.30	
76-13-1	Trichlorotrifluoroethane	ND	0.94	ND	0.12	
75-15-0	Carbon Disulfide	ND	9.4	ND	3.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.94	ND	0.24	
75-34-3	1,1-Dichloroethane	ND	0.94	ND	0.23	
1634-04-4	Methyl tert-Butyl Ether	ND	0.94	ND	0.26	
108-05-4	Vinyl Acetate	ND	9.4	ND	2.7	
78-93-3	2-Butanone (MEK)	ND	9.4	ND	3.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **AA-8hr-046**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01163

Date Collected: 4/17/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.92 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.88

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.94	ND	0.24	
141-78-6	Ethyl Acetate	**5.8**	1.9	**1.6**	0.52	
110-54-3	n-Hexane	ND	0.94	ND	0.27	
67-66-3	Chloroform	ND	0.94	ND	0.19	
109-99-9	Tetrahydrofuran (THF)	ND	0.94	ND	0.32	
107-06-2	1,2-Dichloroethane	ND	0.94	ND	0.23	
71-55-6	1,1,1-Trichloroethane	ND	0.94	ND	0.17	
71-43-2	Benzene	**0.99**	0.94	**0.31**	0.29	
56-23-5	Carbon Tetrachloride	ND	0.94	ND	0.15	
110-82-7	Cyclohexane	ND	1.9	ND	0.55	
78-87-5	1,2-Dichloropropane	ND	0.94	ND	0.20	
75-27-4	Bromodichloromethane	ND	0.94	ND	0.14	
79-01-6	Trichloroethene	**3.1**	0.94	**0.58**	0.17	
123-91-1	1,4-Dioxane	ND	0.94	ND	0.26	
80-62-6	Methyl Methacrylate	ND	1.9	ND	0.46	
142-82-5	n-Heptane	ND	0.94	ND	0.23	
10061-01-5	cis-1,3-Dichloropropene	ND	0.94	ND	0.21	
108-10-1	4-Methyl-2-pentanone	ND	0.94	ND	0.23	
10061-02-6	trans-1,3-Dichloropropene	ND	0.94	ND	0.21	
79-00-5	1,1,2-Trichloroethane	ND	0.94	ND	0.17	
108-88-3	Toluene	**11**	0.94	**3.0**	0.25	
591-78-6	2-Hexanone	ND	0.94	ND	0.23	
124-48-1	Dibromochloromethane	ND	0.94	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	0.94	ND	0.12	
123-86-4	n-Butyl Acetate	**1.0**	0.94	**0.21**	0.20	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **AA-8hr-046** CAS Sample ID: P1301687-005
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/17/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01163

Initial Pressure (psig): -4.92 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.88

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.94	ND	0.20	
127-18-4	Tetrachloroethene	ND	0.94	ND	0.14	
108-90-7	Chlorobenzene	ND	0.94	ND	0.20	
100-41-4	Ethylbenzene	**2.7**	0.94	**0.61**	0.22	
179601-23-1	m,p-Xylenes	**6.3**	1.9	**1.5**	0.43	
75-25-2	Bromoform	ND	0.94	ND	0.091	
100-42-5	Styrene	**6.4**	0.94	**1.5**	0.22	
95-47-6	o-Xylene	**2.0**	0.94	**0.46**	0.22	
111-84-2	n-Nonane	ND	0.94	ND	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.94	ND	0.14	
98-82-8	Cumene	ND	0.94	ND	0.19	
80-56-8	alpha-Pinene	**2.9**	0.94	**0.52**	0.17	
103-65-1	n-Propylbenzene	ND	0.94	ND	0.19	
622-96-8	4-Ethyltoluene	ND	0.94	ND	0.19	
108-67-8	1,3,5-Trimethylbenzene	ND	0.94	ND	0.19	
95-63-6	1,2,4-Trimethylbenzene	ND	0.94	ND	0.19	
100-44-7	Benzyl Chloride	ND	0.94	ND	0.18	
541-73-1	1,3-Dichlorobenzene	ND	0.94	ND	0.16	
106-46-7	1,4-Dichlorobenzene	ND	0.94	ND	0.16	
95-50-1	1,2-Dichlorobenzene	ND	0.94	ND	0.16	
5989-27-5	d-Limonene	ND	0.94	ND	0.17	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.94	ND	0.097	
120-82-1	1,2,4-Trichlorobenzene	ND	0.94	ND	0.13	
91-20-3	Naphthalene	ND	0.94	ND	0.18	
87-68-3	Hexachlorobutadiene	ND	0.94	ND	0.088	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-1**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01131

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 0.060 Liter(s)

Initial Pressure (psig): -5.68 Final Pressure (psig): 3.44

Canister Dilution Factor: 2.01

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	17	ND	9.7	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	17	ND	3.4	
74-87-3	Chloromethane	ND	17	ND	8.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	17	ND	2.4	
75-01-4	Vinyl Chloride	ND	17	ND	6.6	
106-99-0	1,3-Butadiene	ND	17	ND	7.6	
74-83-9	Bromomethane	ND	17	ND	4.3	
75-00-3	Chloroethane	ND	17	ND	6.4	
64-17-5	Ethanol	ND	170	ND	89	
75-05-8	Acetonitrile	ND	17	ND	10	
107-02-8	Acrolein	ND	67	ND	29	
67-64-1	Acetone	ND	170	ND	71	
75-69-4	Trichlorofluoromethane	ND	17	ND	3.0	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	170	ND	68	
107-13-1	Acrylonitrile	ND	17	ND	7.7	
75-35-4	1,1-Dichloroethene	ND	17	ND	4.2	
75-09-2	Methylene Chloride	ND	17	ND	4.8	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	17	ND	5.4	
76-13-1	Trichlorotrifluoroethane	ND	17	ND	2.2	
75-15-0	Carbon Disulfide	ND	170	ND	54	
156-60-5	trans-1,2-Dichloroethene	ND	17	ND	4.2	
75-34-3	1,1-Dichloroethane	**73**	17	**18**	4.1	
1634-04-4	Methyl tert-Butyl Ether	ND	17	ND	4.6	
108-05-4	Vinyl Acetate	ND	170	ND	48	
78-93-3	2-Butanone (MEK)	ND	170	ND	57	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-1** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P1301687-006

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.060 Liter(s)
Test Notes:
Container ID: AC01131

Initial Pressure (psig): -5.68 Final Pressure (psig): 3.44

Canister Dilution Factor: 2.01

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**25**	17	**6.3**	4.2	
141-78-6	Ethyl Acetate	ND	34	ND	9.3	
110-54-3	n-Hexane	ND	17	ND	4.8	
67-66-3	Chloroform	ND	17	ND	3.4	
109-99-9	Tetrahydrofuran (THF)	ND	17	ND	5.7	
107-06-2	1,2-Dichloroethane	ND	17	ND	4.1	
71-55-6	1,1,1-Trichloroethane	**430**	17	**80**	3.1	
71-43-2	Benzene	ND	17	ND	5.2	
56-23-5	Carbon Tetrachloride	ND	17	ND	2.7	
110-82-7	Cyclohexane	ND	34	ND	9.7	
78-87-5	1,2-Dichloropropane	ND	17	ND	3.6	
75-27-4	Bromodichloromethane	ND	17	ND	2.5	
79-01-6	Trichloroethene	**2,700**	17	**500**	3.1	
123-91-1	1,4-Dioxane	**150**	17	**41**	4.6	
80-62-6	Methyl Methacrylate	ND	34	ND	8.2	
142-82-5	n-Heptane	ND	17	ND	4.1	
10061-01-5	cis-1,3-Dichloropropene	ND	17	ND	3.7	
108-10-1	4-Methyl-2-pentanone	ND	17	ND	4.1	
10061-02-6	trans-1,3-Dichloropropene	ND	17	ND	3.7	
79-00-5	1,1,2-Trichloroethane	ND	17	ND	3.1	
108-88-3	Toluene	ND	17	ND	4.4	
591-78-6	2-Hexanone	ND	17	ND	4.1	
124-48-1	Dibromochloromethane	ND	17	ND	2.0	
106-93-4	1,2-Dibromoethane	ND	17	ND	2.2	
123-86-4	n-Butyl Acetate	ND	17	ND	3.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **SB-1** CAS Sample ID: P1301687-006
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.060 Liter(s)
Test Notes:
Container ID: AC01131

Initial Pressure (psig): -5.68 Final Pressure (psig): 3.44

Canister Dilution Factor: 2.01

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	17	ND	3.6	
127-18-4	Tetrachloroethene	ND	17	ND	2.5	
108-90-7	Chlorobenzene	ND	17	ND	3.6	
100-41-4	Ethylbenzene	ND	17	ND	3.9	
179601-23-1	m,p-Xylenes	ND	34	ND	7.7	
75-25-2	Bromoform	ND	17	ND	1.6	
100-42-5	Styrene	ND	17	ND	3.9	
95-47-6	o-Xylene	ND	17	ND	3.9	
111-84-2	n-Nonane	ND	17	ND	3.2	
79-34-5	1,1,2,2-Tetrachloroethane	ND	17	ND	2.4	
98-82-8	Cumene	ND	17	ND	3.4	
80-56-8	alpha-Pinene	ND	17	ND	3.0	
103-65-1	n-Propylbenzene	ND	17	ND	3.4	
622-96-8	4-Ethyltoluene	ND	17	ND	3.4	
108-67-8	1,3,5-Trimethylbenzene	ND	17	ND	3.4	
95-63-6	1,2,4-Trimethylbenzene	ND	17	ND	3.4	
100-44-7	Benzyl Chloride	ND	17	ND	3.2	
541-73-1	1,3-Dichlorobenzene	ND	17	ND	2.8	
106-46-7	1,4-Dichlorobenzene	ND	17	ND	2.8	
95-50-1	1,2-Dichlorobenzene	ND	17	ND	2.8	
5989-27-5	d-Limonene	ND	17	ND	3.0	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17	ND	1.7	
120-82-1	1,2,4-Trichlorobenzene	ND	17	ND	2.3	
91-20-3	Naphthalene	ND	17	ND	3.2	
87-68-3	Hexachlorobutadiene	ND	17	ND	1.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-1**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01013

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.30 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**6.0**	0.74	**3.5**	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.74	**0.42**	0.15	
74-87-3	Chloromethane	ND	0.74	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.74	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.74	ND	0.29	
106-99-0	1,3-Butadiene	ND	0.74	ND	0.33	
74-83-9	Bromomethane	ND	0.74	ND	0.19	
75-00-3	Chloroethane	ND	0.74	ND	0.28	
64-17-5	Ethanol	ND	7.4	ND	3.9	
75-05-8	Acetonitrile	ND	0.74	ND	0.44	
107-02-8	Acrolein	ND	3.0	ND	1.3	
67-64-1	Acetone	**9.3**	7.4	**3.9**	3.1	
75-69-4	Trichlorofluoromethane	**1.1**	0.74	**0.19**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.4	ND	3.0	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.74	ND	0.19	
75-09-2	Methylene Chloride	ND	0.74	ND	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.74	ND	0.24	
76-13-1	Trichlorotrifluoroethane	ND	0.74	ND	0.097	
75-15-0	Carbon Disulfide	ND	7.4	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.74	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.74	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.74	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.4	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	7.4	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-1** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P1301687-007

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01013

Initial Pressure (psig): -2.30 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.74	ND	0.19	
141-78-6	Ethyl Acetate	ND	1.5	ND	0.41	
110-54-3	n-Hexane	ND	0.74	ND	0.21	
67-66-3	Chloroform	ND	0.74	ND	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	0.74	ND	0.25	
107-06-2	1,2-Dichloroethane	ND	0.74	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.74	ND	0.14	
71-43-2	Benzene	ND	0.74	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.74	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.74	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.74	ND	0.11	
79-01-6	Trichloroethene	**1.2**	0.74	**0.22**	0.14	
123-91-1	1,4-Dioxane	ND	0.74	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.36	
142-82-5	n-Heptane	ND	0.74	ND	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.74	ND	0.16	
108-10-1	4-Methyl-2-pentanone	ND	0.74	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.74	ND	0.14	
108-88-3	Toluene	**1.3**	0.74	**0.34**	0.20	
591-78-6	2-Hexanone	ND	0.74	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.74	ND	0.087	
106-93-4	1,2-Dibromoethane	ND	0.74	ND	0.096	
123-86-4	n-Butyl Acetate	ND	0.74	ND	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **IA-1** CAS Sample ID: P1301687-007
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01013

Initial Pressure (psig): -2.30 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.74	ND	0.16	
127-18-4	Tetrachloroethene	ND	0.74	ND	0.11	
108-90-7	Chlorobenzene	ND	0.74	ND	0.16	
100-41-4	Ethylbenzene	ND	0.74	ND	0.17	
179601-23-1	m,p-Xylenes	ND	1.5	ND	0.34	
75-25-2	Bromoform	ND	0.74	ND	0.072	
100-42-5	Styrene	ND	0.74	ND	0.17	
95-47-6	o-Xylene	ND	0.74	ND	0.17	
111-84-2	n-Nonane	ND	0.74	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.74	ND	0.11	
98-82-8	Cumene	ND	0.74	ND	0.15	
80-56-8	alpha-Pinene	**0.94**	0.74	**0.17**	0.13	
103-65-1	n-Propylbenzene	ND	0.74	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.74	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.74	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	ND	0.74	ND	0.15	
100-44-7	Benzyl Chloride	ND	0.74	ND	0.14	
541-73-1	1,3-Dichlorobenzene	ND	0.74	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.74	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.74	ND	0.12	
5989-27-5	d-Limonene	**1.8**	0.74	**0.32**	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	0.74	ND	0.10	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.74	ND	0.069	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-2** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P1301687-008

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 5/1/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.15 Liter(s)
Test Notes:
Container ID: AC01482

Initial Pressure (psig): -9.52 Final Pressure (psig): 3.49

Canister Dilution Factor: 3.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	12	ND	6.8	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	12	ND	2.4	
74-87-3	Chloromethane	ND	12	ND	5.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	12	ND	1.7	
75-01-4	Vinyl Chloride	ND	12	ND	4.6	
106-99-0	1,3-Butadiene	ND	12	ND	5.3	
74-83-9	Bromomethane	ND	12	ND	3.0	
75-00-3	Chloroethane	ND	12	ND	4.4	
64-17-5	Ethanol	**130**	120	**71**	62	
75-05-8	Acetonitrile	ND	12	ND	7.0	
107-02-8	Acrolein	ND	47	ND	20	
67-64-1	Acetone	**160**	120	**68**	49	
75-69-4	Trichlorofluoromethane	ND	12	ND	2.1	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	120	ND	48	
107-13-1	Acrylonitrile	ND	12	ND	5.4	
75-35-4	1,1-Dichloroethene	ND	12	ND	3.0	
75-09-2	Methylene Chloride	ND	12	ND	3.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	12	ND	3.7	
76-13-1	Trichlorotrifluoroethane	ND	12	ND	1.5	
75-15-0	Carbon Disulfide	ND	120	ND	38	
156-60-5	trans-1,2-Dichloroethene	ND	12	ND	3.0	
75-34-3	1,1-Dichloroethane	ND	12	ND	2.9	
1634-04-4	Methyl tert-Butyl Ether	ND	12	ND	3.2	
108-05-4	Vinyl Acetate	ND	120	ND	33	
78-93-3	2-Butanone (MEK)	ND	120	ND	40	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-2** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P1301687-008

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 5/1/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.15 Liter(s)
Test Notes:
Container ID: AC01482

Initial Pressure (psig): -9.52 Final Pressure (psig): 3.49

Canister Dilution Factor: 3.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	12	ND	3.0	
141-78-6	Ethyl Acetate	ND	23	ND	6.5	
110-54-3	n-Hexane	ND	12	ND	3.3	
67-66-3	Chloroform	ND	12	ND	2.4	
109-99-9	Tetrahydrofuran (THF)	ND	12	ND	4.0	
107-06-2	1,2-Dichloroethane	ND	12	ND	2.9	
71-55-6	1,1,1-Trichloroethane	ND	12	ND	2.1	
71-43-2	Benzene	ND	12	ND	3.7	
56-23-5	Carbon Tetrachloride	ND	12	ND	1.9	
110-82-7	Cyclohexane	ND	23	ND	6.8	
78-87-5	1,2-Dichloropropane	ND	12	ND	2.5	
75-27-4	Bromodichloromethane	ND	12	ND	1.7	
79-01-6	Trichloroethene	ND	12	ND	2.2	
123-91-1	1,4-Dioxane	ND	12	ND	3.2	
80-62-6	Methyl Methacrylate	ND	23	ND	5.7	
142-82-5	n-Heptane	ND	12	ND	2.9	
10061-01-5	cis-1,3-Dichloropropene	ND	12	ND	2.6	
108-10-1	4-Methyl-2-pentanone	ND	12	ND	2.9	
10061-02-6	trans-1,3-Dichloropropene	ND	12	ND	2.6	
79-00-5	1,1,2-Trichloroethane	ND	12	ND	2.1	
108-88-3	Toluene	**41**	12	**11**	3.1	
591-78-6	2-Hexanone	ND	12	ND	2.9	
124-48-1	Dibromochloromethane	ND	12	ND	1.4	
106-93-4	1,2-Dibromoethane	ND	12	ND	1.5	
123-86-4	n-Butyl Acetate	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **SB-2** CAS Sample ID: P1301687-008
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 5/1/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.15 Liter(s)
Test Notes:
Container ID: AC01482

Initial Pressure (psig): -9.52 Final Pressure (psig): 3.49

Canister Dilution Factor: 3.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	12	ND	2.5	
127-18-4	Tetrachloroethene	ND	12	ND	1.7	
108-90-7	Chlorobenzene	ND	12	ND	2.5	
100-41-4	Ethylbenzene	**17**	12	**4.0**	2.7	
179601-23-1	m,p-Xylenes	**26**	23	**5.9**	5.4	
75-25-2	Bromoform	ND	12	ND	1.1	
100-42-5	Styrene	ND	12	ND	2.7	
95-47-6	o-Xylene	ND	12	ND	2.7	
111-84-2	n-Nonane	ND	12	ND	2.2	
79-34-5	1,1,2,2-Tetrachloroethane	ND	12	ND	1.7	
98-82-8	Cumene	ND	12	ND	2.4	
80-56-8	alpha-Pinene	ND	12	ND	2.1	
103-65-1	n-Propylbenzene	ND	12	ND	2.4	
622-96-8	4-Ethyltoluene	ND	12	ND	2.4	
108-67-8	1,3,5-Trimethylbenzene	ND	12	ND	2.4	
95-63-6	1,2,4-Trimethylbenzene	ND	12	ND	2.4	
100-44-7	Benzyl Chloride	ND	12	ND	2.3	
541-73-1	1,3-Dichlorobenzene	ND	12	ND	1.9	
106-46-7	1,4-Dichlorobenzene	ND	12	ND	1.9	
95-50-1	1,2-Dichlorobenzene	ND	12	ND	1.9	
5989-27-5	d-Limonene	**150**	12	**27**	2.1	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	ND	1.2	
120-82-1	1,2,4-Trichlorobenzene	ND	12	ND	1.6	
91-20-3	Naphthalene	ND	12	ND	2.2	
87-68-3	Hexachlorobutadiene	ND	12	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-2**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01284

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.58 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**44**	0.83	**26**	0.48	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.83	**0.45**	0.17	
74-87-3	Chloromethane	ND	0.83	ND	0.40	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.83	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.83	ND	0.32	
106-99-0	1,3-Butadiene	**1.2**	0.83	**0.55**	0.38	
74-83-9	Bromomethane	ND	0.83	ND	0.21	
75-00-3	Chloroethane	ND	0.83	ND	0.31	
64-17-5	Ethanol	**32**	8.3	**17**	4.4	
75-05-8	Acetonitrile	ND	0.83	ND	0.49	
107-02-8	Acrolein	ND	3.3	ND	1.4	
67-64-1	Acetone	ND	8.3	ND	3.5	
75-69-4	Trichlorofluoromethane	**1.3**	0.83	**0.23**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.3	ND	3.4	
107-13-1	Acrylonitrile	ND	0.83	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.83	ND	0.21	
75-09-2	Methylene Chloride	**2.7**	0.83	**0.78**	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.83	ND	0.27	
76-13-1	Trichlorotrifluoroethane	ND	0.83	ND	0.11	
75-15-0	Carbon Disulfide	ND	8.3	ND	2.7	
156-60-5	trans-1,2-Dichloroethene	ND	0.83	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.83	ND	0.21	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.3	ND	2.4	
78-93-3	2-Butanone (MEK)	ND	8.3	ND	2.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-2** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P1301687-009

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01284

Initial Pressure (psig): -3.58 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.83	ND	0.21	
141-78-6	Ethyl Acetate	**4.2**	1.7	**1.2**	0.46	
110-54-3	n-Hexane	**1.4**	0.83	**0.39**	0.24	
67-66-3	Chloroform	ND	0.83	ND	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.83	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.83	ND	0.21	
71-55-6	1,1,1-Trichloroethane	ND	0.83	ND	0.15	
71-43-2	Benzene	**1.3**	0.83	**0.41**	0.26	
56-23-5	Carbon Tetrachloride	ND	0.83	ND	0.13	
110-82-7	Cyclohexane	ND	1.7	ND	0.48	
78-87-5	1,2-Dichloropropane	ND	0.83	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.83	ND	0.12	
79-01-6	Trichloroethene	**7.1**	0.83	**1.3**	0.15	
123-91-1	1,4-Dioxane	ND	0.83	ND	0.23	
80-62-6	Methyl Methacrylate	**2.3**	1.7	**0.57**	0.41	
142-82-5	n-Heptane	ND	0.83	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.83	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.83	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.83	ND	0.15	
108-88-3	Toluene	**6.8**	0.83	**1.8**	0.22	
591-78-6	2-Hexanone	ND	0.83	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.83	ND	0.097	
106-93-4	1,2-Dibromoethane	ND	0.83	ND	0.11	
123-86-4	n-Butyl Acetate	**1.3**	0.83	**0.28**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **IA-2** CAS Sample ID: P1301687-009
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01284

Initial Pressure (psig): -3.58 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.83	ND	0.18	
127-18-4	Tetrachloroethene	ND	0.83	ND	0.12	
108-90-7	Chlorobenzene	ND	0.83	ND	0.18	
100-41-4	Ethylbenzene	**2.0**	0.83	**0.46**	0.19	
179601-23-1	m,p-Xylenes	**4.4**	1.7	**1.0**	0.38	
75-25-2	Bromoform	ND	0.83	ND	0.080	
100-42-5	Styrene	**3.6**	0.83	**0.85**	0.20	
95-47-6	o-Xylene	**1.5**	0.83	**0.35**	0.19	
111-84-2	n-Nonane	ND	0.83	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.83	ND	0.12	
98-82-8	Cumene	ND	0.83	ND	0.17	
80-56-8	alpha-Pinene	**8.2**	0.83	**1.5**	0.15	
103-65-1	n-Propylbenzene	ND	0.83	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.83	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.83	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	**1.0**	0.83	**0.21**	0.17	
100-44-7	Benzyl Chloride	ND	0.83	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.83	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.83	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	**0.96**	0.83	**0.17**	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.83	ND	0.086	
120-82-1	1,2,4-Trichlorobenzene	ND	0.83	ND	0.11	
91-20-3	Naphthalene	ND	0.83	ND	0.16	
87-68-3	Hexachlorobutadiene	ND	0.83	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-6**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01580

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)
0.050 Liter(s)

Initial Pressure (psig): -3.52 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**4.5**	0.82	**2.6**	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.82	**0.44**	0.16	
74-87-3	Chloromethane	ND	0.82	ND	0.39	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.82	ND	0.37	
74-83-9	Bromomethane	ND	0.82	ND	0.21	
75-00-3	Chloroethane	**1.4**	0.82	**0.53**	0.31	
64-17-5	Ethanol	ND	8.2	ND	4.3	
75-05-8	Acetonitrile	ND	0.82	ND	0.49	
107-02-8	Acrolein	ND	3.3	ND	1.4	
67-64-1	Acetone	**11**	8.2	**4.5**	3.4	
75-69-4	Trichlorofluoromethane	**1.5**	0.82	**0.28**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.2	ND	3.3	
107-13-1	Acrylonitrile	ND	0.82	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.82	ND	0.21	
75-09-2	Methylene Chloride	ND	0.82	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane	**2.1**	0.82	**0.27**	0.11	
75-15-0	Carbon Disulfide	ND	8.2	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.82	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.82	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.2	ND	2.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-6**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01580

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)
0.050 Liter(s)

Initial Pressure (psig): -3.52 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.45	
110-54-3	n-Hexane	ND	0.82	ND	0.23	
67-66-3	Chloroform	**14**	0.82	**2.9**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	**34**	0.82	**6.3**	0.15	
71-43-2	Benzene	ND	0.82	ND	0.26	
56-23-5	Carbon Tetrachloride	ND	0.82	ND	0.13	
110-82-7	Cyclohexane	**1.6**	1.6	**0.48**	0.47	
78-87-5	1,2-Dichloropropane	ND	0.82	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	**200**	16	**37**	3.0	**D**
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.40	
142-82-5	n-Heptane	ND	0.82	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.82	ND	0.15	
108-88-3	Toluene	**2.0**	0.82	**0.54**	0.22	
591-78-6	2-Hexanone	ND	0.82	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.82	ND	0.096	
106-93-4	1,2-Dibromoethane	ND	0.82	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.82	ND	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **SB-6** CAS Sample ID: P1301687-010
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: AC01580

Initial Pressure (psig): -3.52 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.82	ND	0.17	
127-18-4	Tetrachloroethene	**1.9**	0.82	**0.29**	0.12	
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	ND	0.82	ND	0.19	
179601-23-1	m,p-Xylenes	ND	1.6	ND	0.38	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	ND	0.82	ND	0.19	
111-84-2	n-Nonane	ND	0.82	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	**18**	0.82	**3.3**	0.15	
103-65-1	n-Propylbenzene	ND	0.82	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	0.82	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.82	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.82	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.82	ND	0.14	
5989-27-5	d-Limonene	ND	0.82	ND	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.82	ND	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.82	ND	0.16	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-6**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01049

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.07 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**37**	0.79	**22**	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.79	**0.44**	0.16	
74-87-3	Chloromethane	ND	0.79	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.79	ND	0.31	
106-99-0	1,3-Butadiene	**1.4**	0.79	**0.61**	0.36	
74-83-9	Bromomethane	ND	0.79	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	**22**	7.9	**12**	4.2	
75-05-8	Acetonitrile	ND	0.79	ND	0.47	
107-02-8	Acrolein	ND	3.2	ND	1.4	
67-64-1	Acetone	ND	7.9	ND	3.3	
75-69-4	Trichlorofluoromethane	**1.3**	0.79	**0.23**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.9	ND	3.2	
107-13-1	Acrylonitrile	ND	0.79	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.79	ND	0.20	
75-09-2	Methylene Chloride	**2.8**	0.79	**0.81**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.79	ND	0.25	
76-13-1	Trichlorotrifluoroethane	ND	0.79	ND	0.10	
75-15-0	Carbon Disulfide	ND	7.9	ND	2.5	
156-60-5	trans-1,2-Dichloroethene	ND	0.79	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.79	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.9	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	7.9	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-6**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01049

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.07 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.79	ND	0.20	
141-78-6	Ethyl Acetate	**5.1**	1.6	**1.4**	0.44	
110-54-3	n-Hexane	**1.5**	0.79	**0.42**	0.22	
67-66-3	Chloroform	ND	0.79	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.79	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.79	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.79	ND	0.14	
71-43-2	Benzene	**1.3**	0.79	**0.41**	0.25	
56-23-5	Carbon Tetrachloride	ND	0.79	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.79	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.79	ND	0.12	
79-01-6	Trichloroethene	**8.0**	0.79	**1.5**	0.15	
123-91-1	1,4-Dioxane	ND	0.79	ND	0.22	
80-62-6	Methyl Methacrylate	**2.4**	1.6	**0.59**	0.39	
142-82-5	n-Heptane	ND	0.79	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.79	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.79	ND	0.14	
108-88-3	Toluene	**7.2**	0.79	**1.9**	0.21	
591-78-6	2-Hexanone	ND	0.79	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.79	ND	0.093	
106-93-4	1,2-Dibromoethane	ND	0.79	ND	0.10	
123-86-4	n-Butyl Acetate	**1.2**	0.79	**0.26**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **IA-6** CAS Sample ID: P1301687-011
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/18/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 4/23/13
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01049

Initial Pressure (psig): -3.07 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.79	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.79	ND	0.12	
108-90-7	Chlorobenzene	ND	0.79	ND	0.17	
100-41-4	Ethylbenzene	**2.1**	0.79	**0.49**	0.18	
179601-23-1	m,p-Xylenes	**4.7**	1.6	**1.1**	0.36	
75-25-2	Bromoform	ND	0.79	ND	0.076	
100-42-5	Styrene	**4.1**	0.79	**0.96**	0.19	
95-47-6	o-Xylene	**1.7**	0.79	**0.38**	0.18	
111-84-2	n-Nonane	**0.83**	0.79	**0.16**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.79	ND	0.12	
98-82-8	Cumene	ND	0.79	ND	0.16	
80-56-8	alpha-Pinene	**9.5**	0.79	**1.7**	0.14	
103-65-1	n-Propylbenzene	ND	0.79	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.79	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.79	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**1.1**	0.79	**0.23**	0.16	
100-44-7	Benzyl Chloride	ND	0.79	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.79	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.79	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.79	ND	0.13	
5989-27-5	d-Limonene	**1.2**	0.79	**0.21**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	ND	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	0.79	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.79	ND	0.074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130429-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130429-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **Method Blank** CAS Sample ID: P130429-MB
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P130430-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 4/30/13
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130430-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **Method Blank** CAS Sample ID: P130430-MB
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P130501-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/1/13
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130501-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/1/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301687
Client Sample ID: **Method Blank** CAS Sample ID: P130501-MB
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/1/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

SURROGATE SPIKE RECOVERY RESULTS

Client: **Energy Solutions, Inc.**
Client Project ID: **Leica / 137015** CAS Project ID: P1301687

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 4/17 - 4/18/13
Analyst: Elsa Moctezuma Date(s) Received: 4/23/13
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 4/29 - 5/1/13
Test Notes:

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P130429-MB	**99**	**100**	**102**	70-130	
Method Blank	P130430-MB	**99**	**101**	**103**	70-130	
Method Blank	P130501-MB	**101**	**100**	**103**	70-130	
Lab Control Sample	P130429-LCS	**98**	**100**	**106**	70-130	
Lab Control Sample	P130430-LCS	**97**	**103**	**100**	70-130	
Lab Control Sample	P130501-LCS	**99**	**101**	**106**	70-130	
AA-8hr-049	P1301687-001	**97**	**103**	**98**	70-130	
AA-8hr-050	P1301687-002	**98**	**103**	**98**	70-130	
AA-8hr-048	P1301687-003	**98**	**101**	**100**	70-130	
AA-8hr-047	P1301687-004	**98**	**104**	**97**	70-130	
AA-8hr-046	P1301687-005	**99**	**101**	**101**	70-130	
SB-1	P1301687-006	**100**	**102**	**101**	70-130	
SB-1	P1301687-006DUP	**99**	**101**	**101**	70-130	
IA-1	P1301687-007	**99**	**101**	**101**	70-130	
SB-2	P1301687-008	**100**	**99**	**106**	70-130	
IA-2	P1301687-009	**99**	**101**	**100**	70-130	
SB-6	P1301687-010	**100**	**101**	**100**	70-130	
IA-6	P1301687-011	**99**	**101**	**100**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130429-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	204	**202**	**99**	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	202	**184**	**91**	63-115	
74-87-3	Chloromethane	196	**182**	**93**	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	206	**192**	**93**	65-115	
75-01-4	Vinyl Chloride	200	**188**	**94**	64-122	
106-99-0	1,3-Butadiene	210	**224**	**107**	57-141	
74-83-9	Bromomethane	200	**193**	**97**	68-122	
75-00-3	Chloroethane	202	**190**	**94**	66-120	
64-17-5	Ethanol	958	**871**	**91**	58-126	
75-05-8	Acetonitrile	202	**186**	**92**	64-136	
107-02-8	Acrolein	204	**191**	**94**	58-129	
67-64-1	Acetone	1,040	**925**	**89**	60-114	
75-69-4	Trichlorofluoromethane	210	**178**	**85**	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	396	**300**	**76**	54-118	
107-13-1	Acrylonitrile	206	**206**	**100**	72-143	
75-35-4	1,1-Dichloroethene	218	**210**	**96**	69-119	
75-09-2	Methylene Chloride	212	**180**	**85**	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	214	**154**	**72**	59-131	
76-13-1	Trichlorotrifluoroethane	212	**200**	**94**	69-117	
75-15-0	Carbon Disulfide	208	**179**	**86**	65-115	
156-60-5	trans-1,2-Dichloroethene	202	**201**	**100**	70-126	
75-34-3	1,1-Dichloroethane	206	**187**	**91**	68-116	
1634-04-4	Methyl tert-Butyl Ether	204	**173**	**85**	69-120	
108-05-4	Vinyl Acetate	988	**959**	**97**	58-160	
78-93-3	2-Butanone (MEK)	212	**198**	**93**	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130429-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	**202**	**94**	70-119	
141-78-6	Ethyl Acetate	412	**400**	**97**	72-129	
110-54-3	n-Hexane	206	**181**	**88**	63-115	
67-66-3	Chloroform	222	**196**	**88**	68-110	
109-99-9	Tetrahydrofuran (THF)	208	**210**	**101**	60-126	
107-06-2	1,2-Dichloroethane	208	**192**	**92**	69-118	
71-55-6	1,1,1-Trichloroethane	204	**193**	**95**	68-120	
71-43-2	Benzene	208	**177**	**85**	69-117	
56-23-5	Carbon Tetrachloride	212	**205**	**97**	65-134	
110-82-7	Cyclohexane	402	**375**	**93**	69-114	
78-87-5	1,2-Dichloropropane	204	**190**	**93**	70-116	
75-27-4	Bromodichloromethane	204	**199**	**98**	71-126	
79-01-6	Trichloroethene	198	**193**	**97**	71-119	
123-91-1	1,4-Dioxane	206	**187**	**91**	72-126	
80-62-6	Methyl Methacrylate	414	**415**	**100**	75-136	
142-82-5	n-Heptane	202	**187**	**93**	70-117	
10061-01-5	cis-1,3-Dichloropropene	196	**196**	**100**	75-132	
108-10-1	4-Methyl-2-pentanone	210	**206**	**98**	70-133	
10061-02-6	trans-1,3-Dichloropropene	218	**224**	**103**	78-136	
79-00-5	1,1,2-Trichloroethane	202	**192**	**95**	72-119	
108-88-3	Toluene	208	**181**	**87**	65-116	
591-78-6	2-Hexanone	228	**208**	**91**	62-132	
124-48-1	Dibromochloromethane	216	**218**	**101**	66-140	
106-93-4	1,2-Dibromoethane	208	**201**	**97**	69-130	
123-86-4	n-Butyl Acetate	228	**209**	**92**	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130429-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/29/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	206	**188**	**91**	66-118	
127-18-4	Tetrachloroethene	190	**177**	**93**	63-123	
108-90-7	Chlorobenzene	208	**193**	**93**	66-118	
100-41-4	Ethylbenzene	206	**187**	**91**	66-119	
179601-23-1	m,p-Xylenes	412	**369**	**90**	64-118	
75-25-2	Bromoform	216	**214**	**99**	64-140	
100-42-5	Styrene	208	**192**	**92**	68-132	
95-47-6	o-Xylene	200	**183**	**92**	65-120	
111-84-2	n-Nonane	202	**180**	**89**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	198	**186**	**94**	63-128	
98-82-8	Cumene	196	**177**	**90**	65-121	
80-56-8	alpha-Pinene	192	**179**	**93**	66-123	
103-65-1	n-Propylbenzene	198	**179**	**90**	65-121	
622-96-8	4-Ethyltoluene	204	**185**	**91**	64-122	
108-67-8	1,3,5-Trimethylbenzene	208	**191**	**92**	64-125	
95-63-6	1,2,4-Trimethylbenzene	200	**196**	**98**	64-131	
100-44-7	Benzyl Chloride	206	**220**	**107**	67-146	
541-73-1	1,3-Dichlorobenzene	206	**189**	**92**	64-130	
106-46-7	1,4-Dichlorobenzene	212	**182**	**86**	61-124	
95-50-1	1,2-Dichlorobenzene	204	**183**	**90**	63-126	
5989-27-5	d-Limonene	206	**200**	**97**	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	202	**206**	**102**	62-155	
120-82-1	1,2,4-Trichlorobenzene	200	**195**	**98**	59-146	
91-20-3	Naphthalene	178	**178**	**100**	56-143	
87-68-3	Hexachlorobutadiene	208	**188**	**90**	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130430-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	CAS Acceptance Limits	**Data Qualifier**
115-07-1	Propene	204	**204**	**100**	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	202	**182**	**90**	63-115	
74-87-3	Chloromethane	196	**178**	**91**	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	206	**190**	**92**	65-115	
75-01-4	Vinyl Chloride	200	**185**	**93**	64-122	
106-99-0	1,3-Butadiene	210	**221**	**105**	57-141	
74-83-9	Bromomethane	200	**192**	**96**	68-122	
75-00-3	Chloroethane	202	**189**	**94**	66-120	
64-17-5	Ethanol	958	**860**	**90**	58-126	
75-05-8	Acetonitrile	202	**184**	**91**	64-136	
107-02-8	Acrolein	204	**187**	**92**	58-129	
67-64-1	Acetone	1,040	**904**	**87**	60-114	
75-69-4	Trichlorofluoromethane	210	**176**	**84**	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	396	**290**	**73**	54-118	
107-13-1	Acrylonitrile	206	**204**	**99**	72-143	
75-35-4	1,1-Dichloroethene	218	**207**	**95**	69-119	
75-09-2	Methylene Chloride	212	**178**	**84**	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	214	**151**	**71**	59-131	
76-13-1	Trichlorotrifluoroethane	212	**198**	**93**	69-117	
75-15-0	Carbon Disulfide	208	**177**	**85**	65-115	
156-60-5	trans-1,2-Dichloroethene	202	**198**	**98**	70-126	
75-34-3	1,1-Dichloroethane	206	**185**	**90**	68-116	
1634-04-4	Methyl tert-Butyl Ether	204	**173**	**85**	69-120	
108-05-4	Vinyl Acetate	988	**954**	**97**	58-160	
78-93-3	2-Butanone (MEK)	212	**196**	**92**	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130430-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	**201**	**94**	70-119	
141-78-6	Ethyl Acetate	412	**395**	**96**	72-129	
110-54-3	n-Hexane	206	**177**	**86**	63-115	
67-66-3	Chloroform	222	**194**	**87**	68-110	
109-99-9	Tetrahydrofuran (THF)	208	**209**	**100**	60-126	
107-06-2	1,2-Dichloroethane	208	**190**	**91**	69-118	
71-55-6	1,1,1-Trichloroethane	204	**193**	**95**	68-120	
71-43-2	Benzene	208	**177**	**85**	69-117	
56-23-5	Carbon Tetrachloride	212	**205**	**97**	65-134	
110-82-7	Cyclohexane	402	**375**	**93**	69-114	
78-87-5	1,2-Dichloropropane	204	**188**	**92**	70-116	
75-27-4	Bromodichloromethane	204	**199**	**98**	71-126	
79-01-6	Trichloroethene	198	**193**	**97**	71-119	
123-91-1	1,4-Dioxane	206	**186**	**90**	72-126	
80-62-6	Methyl Methacrylate	414	**410**	**99**	75-136	
142-82-5	n-Heptane	202	**186**	**92**	70-117	
10061-01-5	cis-1,3-Dichloropropene	196	**195**	**99**	75-132	
108-10-1	4-Methyl-2-pentanone	210	**204**	**97**	70-133	
10061-02-6	trans-1,3-Dichloropropene	218	**223**	**102**	78-136	
79-00-5	1,1,2-Trichloroethane	202	**192**	**95**	72-119	
108-88-3	Toluene	208	**188**	**90**	65-116	
591-78-6	2-Hexanone	228	**214**	**94**	62-132	
124-48-1	Dibromochloromethane	216	**228**	**106**	66-140	
106-93-4	1,2-Dibromoethane	208	**208**	**100**	69-130	
123-86-4	n-Butyl Acetate	228	**216**	**95**	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130430-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 4/30/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	206	**193**	**94**	66-118	
127-18-4	Tetrachloroethene	190	**184**	**97**	63-123	
108-90-7	Chlorobenzene	208	**200**	**96**	66-118	
100-41-4	Ethylbenzene	206	**194**	**94**	66-119	
179601-23-1	m,p-Xylenes	412	**382**	**93**	64-118	
75-25-2	Bromoform	216	**221**	**102**	64-140	
100-42-5	Styrene	208	**199**	**96**	68-132	
95-47-6	o-Xylene	200	**190**	**95**	65-120	
111-84-2	n-Nonane	202	**185**	**92**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	198	**194**	**98**	63-128	
98-82-8	Cumene	196	**184**	**94**	65-121	
80-56-8	alpha-Pinene	192	**184**	**96**	66-123	
103-65-1	n-Propylbenzene	198	**184**	**93**	65-121	
622-96-8	4-Ethyltoluene	204	**190**	**93**	64-122	
108-67-8	1,3,5-Trimethylbenzene	208	**197**	**95**	64-125	
95-63-6	1,2,4-Trimethylbenzene	200	**202**	**101**	64-131	
100-44-7	Benzyl Chloride	206	**227**	**110**	67-146	
541-73-1	1,3-Dichlorobenzene	206	**196**	**95**	64-130	
106-46-7	1,4-Dichlorobenzene	212	**189**	**89**	61-124	
95-50-1	1,2-Dichlorobenzene	204	**190**	**93**	63-126	
5989-27-5	d-Limonene	206	**206**	**100**	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	202	**214**	**106**	62-155	
120-82-1	1,2,4-Trichlorobenzene	200	**198**	**99**	59-146	
91-20-3	Naphthalene	178	**181**	**102**	56-143	
87-68-3	Hexachlorobutadiene	208	**194**	**93**	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130501-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/01/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	204	**204**	**100**	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	202	**197**	**98**	63-115	
74-87-3	Chloromethane	196	**195**	**99**	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	206	**204**	**99**	65-115	
75-01-4	Vinyl Chloride	200	**203**	**102**	64-122	
106-99-0	1,3-Butadiene	210	**244**	**116**	57-141	
74-83-9	Bromomethane	200	**210**	**105**	68-122	
75-00-3	Chloroethane	202	**206**	**102**	66-120	
64-17-5	Ethanol	958	**996**	**104**	58-126	
75-05-8	Acetonitrile	202	**209**	**103**	64-136	
107-02-8	Acrolein	204	**213**	**104**	58-129	
67-64-1	Acetone	1,040	**1020**	**98**	60-114	
75-69-4	Trichlorofluoromethane	210	**194**	**92**	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	396	**364**	**92**	54-118	
107-13-1	Acrylonitrile	206	**233**	**113**	72-143	
75-35-4	1,1-Dichloroethene	218	**231**	**106**	69-119	
75-09-2	Methylene Chloride	212	**199**	**94**	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	214	**173**	**81**	59-131	
76-13-1	Trichlorotrifluoroethane	212	**218**	**103**	69-117	
75-15-0	Carbon Disulfide	208	**197**	**95**	65-115	
156-60-5	trans-1,2-Dichloroethene	202	**224**	**111**	70-126	
75-34-3	1,1-Dichloroethane	206	**208**	**101**	68-116	
1634-04-4	Methyl tert-Butyl Ether	204	**215**	**105**	69-120	
108-05-4	Vinyl Acetate	988	**1070**	**108**	58-160	
78-93-3	2-Butanone (MEK)	212	**220**	**104**	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130501-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/01/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	**226**	**106**	70-119	
141-78-6	Ethyl Acetate	412	**445**	**108**	72-129	
110-54-3	n-Hexane	206	**197**	**96**	63-115	
67-66-3	Chloroform	222	**218**	**98**	68-110	
109-99-9	Tetrahydrofuran (THF)	208	**234**	**113**	60-126	
107-06-2	1,2-Dichloroethane	208	**214**	**103**	69-118	
71-55-6	1,1,1-Trichloroethane	204	**215**	**105**	68-120	
71-43-2	Benzene	208	**196**	**94**	69-117	
56-23-5	Carbon Tetrachloride	212	**229**	**108**	65-134	
110-82-7	Cyclohexane	402	**415**	**103**	69-114	
78-87-5	1,2-Dichloropropane	204	**210**	**103**	70-116	
75-27-4	Bromodichloromethane	204	**221**	**108**	71-126	
79-01-6	Trichloroethene	198	**213**	**108**	71-119	
123-91-1	1,4-Dioxane	206	**209**	**101**	72-126	
80-62-6	Methyl Methacrylate	414	**460**	**111**	75-136	
142-82-5	n-Heptane	202	**206**	**102**	70-117	
10061-01-5	cis-1,3-Dichloropropene	196	**217**	**111**	75-132	
108-10-1	4-Methyl-2-pentanone	210	**229**	**109**	70-133	
10061-02-6	trans-1,3-Dichloropropene	218	**249**	**114**	78-136	
79-00-5	1,1,2-Trichloroethane	202	**212**	**105**	72-119	
108-88-3	Toluene	208	**201**	**97**	65-116	
591-78-6	2-Hexanone	228	**233**	**102**	62-132	
124-48-1	Dibromochloromethane	216	**243**	**113**	66-140	
106-93-4	1,2-Dibromoethane	208	**224**	**108**	69-130	
123-86-4	n-Butyl Acetate	228	**236**	**104**	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301687
Client Project ID: **Leica / 137015** CAS Sample ID: P130501-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/01/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	CAS Acceptance Limits	**Data Qualifier**
111-65-9	n-Octane	206	**210**	**102**	66-118	
127-18-4	Tetrachloroethene	190	**197**	**104**	63-123	
108-90-7	Chlorobenzene	208	**214**	**103**	66-118	
100-41-4	Ethylbenzene	206	**209**	**101**	66-119	
179601-23-1	m,p-Xylenes	412	**414**	**100**	64-118	
75-25-2	Bromoform	216	**239**	**111**	64-140	
100-42-5	Styrene	208	**218**	**105**	68-132	
95-47-6	o-Xylene	200	**206**	**103**	65-120	
111-84-2	n-Nonane	202	**202**	**100**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	198	**209**	**106**	63-128	
98-82-8	Cumene	196	**198**	**101**	65-121	
80-56-8	alpha-Pinene	192	**204**	**106**	66-123	
103-65-1	n-Propylbenzene	198	**199**	**101**	65-121	
622-96-8	4-Ethyltoluene	204	**205**	**100**	64-122	
108-67-8	1,3,5-Trimethylbenzene	208	**214**	**103**	64-125	
95-63-6	1,2,4-Trimethylbenzene	200	**218**	**109**	64-131	
100-44-7	Benzyl Chloride	206	**249**	**121**	67-146	
541-73-1	1,3-Dichlorobenzene	206	**213**	**103**	64-130	
106-46-7	1,4-Dichlorobenzene	212	**206**	**97**	61-124	
95-50-1	1,2-Dichlorobenzene	204	**206**	**101**	63-126	
5989-27-5	d-Limonene	206	**236**	**115**	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	202	**234**	**116**	62-155	
120-82-1	1,2,4-Trichlorobenzene	200	**227**	**114**	59-146	
91-20-3	Naphthalene	178	**212**	**119**	56-143	
87-68-3	Hexachlorobutadiene	208	**220**	**106**	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-1**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-006DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01131

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 0.060 Liter(s)

Initial Pressure (psig): -5.68 Final Pressure (psig): 3.44

Canister Dilution Factor: 2.01

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Propene	ND	ND	ND	ND	-	-	25	
Dichlorodifluoromethane (CFC 12)	ND	ND	ND	ND	-	-	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
Acetonitrile	ND	ND	ND	ND	-	-	25	
Acrolein	ND	ND	ND	ND	-	-	25	
Acetone	ND	ND	ND	ND	-	-	25	
Trichlorofluoromethane	ND	ND	ND	ND	-	-	25	
2-Propanol (Isopropyl Alcohol)	ND	ND	ND	ND	-	-	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	73.4	18.2	72.4	17.9	72.9	**1**	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-1**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-006DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01131

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 0.060 Liter(s)

Initial Pressure (psig): -5.68 Final Pressure (psig): 3.44

Canister Dilution Factor: 2.01

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
cis-1,2-Dichloroethene	25.1	6.34	24.6	6.20	24.85	**2**	25	
Ethyl Acetate	ND	ND	ND	ND	-	-	25	
n-Hexane	ND	ND	ND	ND	-	-	25	
Chloroform	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran (THF)	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	434	79.6	430	78.8	432	**0.9**	25	
Benzene	ND	ND	ND	ND	-	-	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	2,680	499	2,680	498	2680	**0**	25	
1,4-Dioxane	146	40.7	146	40.4	146	**0**	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	ND	ND	ND	ND	-	-	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Butyl Acetate	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-1**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301687
CAS Sample ID: P1301687-006DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01131

Date Collected: 4/18/13
Date Received: 4/23/13
Date Analyzed: 4/30/13
Volume(s) Analyzed: 0.060 Liter(s)

Initial Pressure (psig): -5.68 Final Pressure (psig): 3.44

Canister Dilution Factor: 2.01

Compound	Sample Result µg/m³	Sample Result ppbV	**Duplicate Sample Result µg/m³**	**Duplicate Sample Result ppbV**	Average µg/m³	**% RPD**	RPD Limit	**Data Qualifier**
n-Octane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	ND	ND	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	ND	ND	-	-	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	ND	ND	ND	ND	-	-	25	
n-Nonane	ND	ND	ND	ND	-	-	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
alpha-Pinene	ND	ND	ND	ND	-	-	25	
n-Propylbenzene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
d-Limonene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY REPORT

May 7, 2013

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

RE: Leica / 137015

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on April 24, 2013. For your reference, these analyses have been assigned our service request number P1301748.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Aguilera

By Kate Aguilera at 12:50 pm, May 08, 2013

Kate Aguilera
Project Manager

Client: Energy Solutions, Inc. Service Request No: P1301748
Project: Leica / 137015

CASE NARRATIVE

The samples were received intact under chain of custody on April 24, 2013 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Helium Analysis

Six of the samples were analyzed for helium according to modified EPA Method 3C (single injection) using a gas chromatograph equipped with a thermal conductivity detector (TCD). This method is not included on the laboratory's NELAP scope of accreditation.

Volatile Organic Compound Analysis

All of the samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP scope of accreditation.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

Columbia Analytical Services, Inc. dba ALS Environmental – Simi Valley

Certifications, Accreditations, and Registrations

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L11-203
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2012039
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	494864
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-12-3
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA015272012-2
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.caslab.com, www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

DETAIL SUMMARY REPORT

Client: Energy Solutions, Inc.
Project ID: Leica / 137015
Service Request: P1301748

Date Received: 4/24/2013
Time Received: 10:10

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	3C Modified - Helium Can	TO-15 - VOC Cans
SB-3	P1301748-001	Air	4/19/2013	16:30	AC01582	-3.72	3.83	X	X
IA-3	P1301748-002	Air	4/19/2013	16:30	AC01348	-3.23	3.70		X
SS-8hr-051	P1301748-003	Air	4/19/2013	16:00	AC01382	-4.33	3.71	X	X
SS-8hr-052	P1301748-004	Air	4/19/2013	16:15	AC00876	-2.72	3.54	X	X
IA-8hr-051	P1301748-005	Air	4/19/2013	16:00	AS00384	-2.77	3.65		X
IA-8hr-052	P1301748-006	Air	4/19/2013	16:15	AC01159	-4.74	3.66		X
IA-8hr-056	P1301748-008	Air	4/20/2013	15:30	AC01305	-3.10	3.78		X
SS-8hr-053	P1301748-009	Air	4/20/2013	15:45	AC01901	-2.26	3.60	X	X
IA-8hr-053	P1301748-010	Air	4/20/2013	15:45	AC00915	-2.61	3.67		X
SS-8hr-054	P1301748-011	Air	4/20/2013	16:10	AC01363	-3.70	3.54	X	X
IA-8hr-054	P1301748-012	Air	4/20/2013	16:10	AC00509	-2.99	3.70		X
SS-8hr-055	P1301748-013	Air	4/20/2013	15:50	AC00676	-3.20	3.61	X	X
IA-8hr-055	P1301748-014	Air	4/20/2013	15:50	AC01414	-2.50	3.77		X

Columbia Analytical Services

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day-Standard)

CAS Project No. R1302174S

Company Name & Address (Reporting Information)
ENERGY SOLUTIONS
100 Mill Plain Rd
DANBURY CT 06811

Project Name: LEICA
Project Number: 137015
P.O. # / Billing Information

CAS Contact: K. Aguilera

Project Manager: Bob McPeak
Phone: 801 303 1092
Fax:
Email Address for Result Reporting: RMcPeak@EnergySolutions.com
Sampler (Print & Sign): DAN SLYWKA

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15	He	Comments e.g. Actual Preservative or specific instructions
SB-3	1-3.67	4/19/13	0830 1630	AC01582	FCA00490	28.0	6.0	6L	X	X	
IA-3	2-3.32	4/19/13	0830 1630	AC01348	FCA00007	29.5	9.0	6L	X		
SS-8hr-051	3-4.30	4/19/13	0800 1600	AC01382	FCA00532	29.0	8.5	6L	X	X	
SS-8hr-052	4-2.68	4/19/13	0815 1615	AC00876	FCA00193	27.5	5.0	6L	X	X	
IA-8hr-051	5-2.81	4/19/13	0800 1600	AS00384	FCA00408	27.5	5.0	6L	X		
IA-8hr-052	6-4.80	4/19/13	0815 1615	AC01159	FCA00177	29.0	10.0	6L	X		
OA-01	7	4/19/13	0830 1630	SLC00146	FC00853	30.0	7.0	6L	X		
IA-8hr-056	8-3.14	4/20/13	0720 1530	AC01305	FCA00233	27.5	6.0	6L	X		
SS-8hr-053	9-2.19	4/20/13	0740 1545	AC01901	FCA00174	29.0	6.0	6L	X	X	
IA-8hr-053	10-2.66	4/20/13	0740 1545	AC00915	FCA00075	30.0	6.0	6L	X		
SS-8hr-054	11-3.65	4/20/13	0805 1610	AC01363	FCA00203	29.0	5.0	6L	X	X	
IA-8hr-054	12-3.04	4/20/13	0805 1610	AC00509	FCA00480	30.0+	11.0	6L	X		
SS-8hr-055	13-3.18	4/20/13	0730 1550	AC00676	FCA00246	29.0	6.0	6L	X	X	
IA-8hr-055	14-2.53	4/20/13	0730 1550	AC01414	FCA00678	29.5	6.0	6L	X		

5 of 64

Report Tier Levels - please select
Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge ____
EDD required Yes / No
Type: NY DEC

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Wayne Nadeau	4/22/13	1115	[signature]	4-22-13	1115
[signature]	4/23/13	1530	[signature]	4/24/13	1010

Cooler / Blank Temperature ____ °C

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Sample Acceptance Check Form

Client: Energy Solutions, Inc. Work order: P1301748

Project: Leica / 137015

Sample(s) received on: 4/24/13 Date opened: 4/24/13 by: MZAMORA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by ALS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1301748-001.01	6.0 L Ambient Can					
P1301748-002.01	6.0 L Ambient Can					
P1301748-003.01	6.0 L Ambient Can					
P1301748-004.01	6.0 L Ambient Can					
P1301748-005.01	6.0 L Silonite Can					
P1301748-006.01	6.0 L Ambient Can					
P1301748-007.01	6.0 L Ambient Can					Sample not received.
P1301748-008.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

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Sample Acceptance Check Form

Client: Energy Solutions, Inc. Work order: P1301748

Project: Leica / 137015

Sample(s) received on: 4/24/13 Date opened: 4/24/13 by: MZAMORA

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1301748-009.01	6.0 L Ambient Can					
P1301748-010.01	6.0 L Ambient Can					
P1301748-011.01	6.0 L Ambient Can					
P1301748-012.01	6.0 L Ambient Can					
P1301748-013.01	6.0 L Ambient Can					
P1301748-014.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Project ID: **Leica / 137015** CAS Project ID: P1301748

Helium

Test Code: EPA 3C Modified
Instrument ID: HP5890 II/GC8/TCD
Analyst: Jennifer Young
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 4/19 - 4/20/13
Date Received: 4/24/13
Date Analyzed: 4/27/13

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SB-3	P1301748-001	1.00	1.69	**5,900**	42	
SS-8hr-051	P1301748-003	1.00	1.78	**3,200**	45	
SS-8hr-052	P1301748-004	1.00	1.52	**1,900**	38	
SS-8hr-053	P1301748-009	1.00	1.47	**10,000**	37	
SS-8hr-054	P1301748-011	1.00	1.66	**15,000**	42	
SS-8hr-055	P1301748-013	1.00	1.59	**2,100**	40	
Method Blank	P130427-MB	1.00	1.00	ND	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130427-LCS

Test Code: EPA 3C Modified Date Collected: NA
Instrument ID: HP5890 II/GC8/TCD Date Received: NA
Analyst: Jennifer Young Date Analyzed: 4/27/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount ppmV	Result ppmV	% Recovery	CAS Acceptance Limits	Data Qualifier
7440-59-7	Helium	10,000	**11,200**	**112**	70-127	

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-3**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01582

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 0.25 Liter(s)
0.050 Liter(s)

Initial Pressure (psig): -3.72 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	3.4	ND	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	3.4	ND	0.68	
74-87-3	Chloromethane	ND	3.4	ND	1.6	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.4	ND	0.48	
75-01-4	Vinyl Chloride	**4.4**	3.4	**1.7**	1.3	
106-99-0	1,3-Butadiene	ND	3.4	ND	1.5	
74-83-9	Bromomethane	ND	3.4	ND	0.87	
75-00-3	Chloroethane	ND	3.4	ND	1.3	
64-17-5	Ethanol	ND	34	ND	18	
75-05-8	Acetonitrile	ND	3.4	ND	2.0	
107-02-8	Acrolein	ND	14	ND	5.9	
67-64-1	Acetone	ND	34	ND	14	
75-69-4	Trichlorofluoromethane	ND	3.4	ND	0.60	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	34	ND	14	
107-13-1	Acrylonitrile	ND	3.4	ND	1.6	
75-35-4	1,1-Dichloroethene	**5.3**	3.4	**1.3**	0.85	
75-09-2	Methylene Chloride	ND	3.4	ND	0.97	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.4	ND	1.1	
76-13-1	Trichlorotrifluoroethane	ND	3.4	ND	0.44	
75-15-0	Carbon Disulfide	ND	34	ND	11	
156-60-5	trans-1,2-Dichloroethene	**190**	3.4	**47**	0.85	
75-34-3	1,1-Dichloroethane	**4.7**	3.4	**1.2**	0.84	
1634-04-4	Methyl tert-Butyl Ether	ND	3.4	ND	0.94	
108-05-4	Vinyl Acetate	ND	34	ND	9.6	
78-93-3	2-Butanone (MEK)	ND	34	ND	11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SB-3**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01582

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 0.25 Liter(s)
0.050 Liter(s)

Initial Pressure (psig): -3.72 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**280**	3.4	**71**	0.85	
141-78-6	Ethyl Acetate	ND	6.8	ND	1.9	
110-54-3	n-Hexane	ND	3.4	ND	0.96	
67-66-3	Chloroform	ND	3.4	ND	0.69	
109-99-9	Tetrahydrofuran (THF)	ND	3.4	ND	1.1	
107-06-2	1,2-Dichloroethane	ND	3.4	ND	0.84	
71-55-6	1,1,1-Trichloroethane	**7.6**	3.4	**1.4**	0.62	
71-43-2	Benzene	ND	3.4	ND	1.1	
56-23-5	Carbon Tetrachloride	ND	3.4	ND	0.54	
110-82-7	Cyclohexane	ND	6.8	ND	2.0	
78-87-5	1,2-Dichloropropane	ND	3.4	ND	0.73	
75-27-4	Bromodichloromethane	ND	3.4	ND	0.50	
79-01-6	Trichloroethene	**750**	17	**140**	3.1	**D**
123-91-1	1,4-Dioxane	ND	3.4	ND	0.94	
80-62-6	Methyl Methacrylate	ND	6.8	ND	1.7	
142-82-5	n-Heptane	ND	3.4	ND	0.83	
10061-01-5	cis-1,3-Dichloropropene	ND	3.4	ND	0.74	
108-10-1	4-Methyl-2-pentanone	ND	3.4	ND	0.83	
10061-02-6	trans-1,3-Dichloropropene	ND	3.4	ND	0.74	
79-00-5	1,1,2-Trichloroethane	ND	3.4	ND	0.62	
108-88-3	Toluene	ND	3.4	ND	0.90	
591-78-6	2-Hexanone	ND	3.4	ND	0.83	
124-48-1	Dibromochloromethane	ND	3.4	ND	0.40	
106-93-4	1,2-Dibromoethane	ND	3.4	ND	0.44	
123-86-4	n-Butyl Acetate	ND	3.4	ND	0.71	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **SB-3** CAS Sample ID: P1301748-001
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.25 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: AC01582

Initial Pressure (psig): -3.72 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	3.4	ND	0.72	
127-18-4	Tetrachloroethene	**7.7**	3.4	**1.1**	0.50	
108-90-7	Chlorobenzene	ND	3.4	ND	0.73	
100-41-4	Ethylbenzene	ND	3.4	ND	0.78	
179601-23-1	m,p-Xylenes	ND	6.8	ND	1.6	
75-25-2	Bromoform	ND	3.4	ND	0.33	
100-42-5	Styrene	ND	3.4	ND	0.79	
95-47-6	o-Xylene	ND	3.4	ND	0.78	
111-84-2	n-Nonane	ND	3.4	ND	0.64	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.4	ND	0.49	
98-82-8	Cumene	ND	3.4	ND	0.69	
80-56-8	alpha-Pinene	**18**	3.4	**3.3**	0.61	
103-65-1	n-Propylbenzene	ND	3.4	ND	0.69	
622-96-8	4-Ethyltoluene	ND	3.4	ND	0.69	
108-67-8	1,3,5-Trimethylbenzene	ND	3.4	ND	0.69	
95-63-6	1,2,4-Trimethylbenzene	ND	3.4	ND	0.69	
100-44-7	Benzyl Chloride	ND	3.4	ND	0.65	
541-73-1	1,3-Dichlorobenzene	ND	3.4	ND	0.56	
106-46-7	1,4-Dichlorobenzene	ND	3.4	ND	0.56	
95-50-1	1,2-Dichlorobenzene	ND	3.4	ND	0.56	
5989-27-5	d-Limonene	ND	3.4	ND	0.61	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.4	ND	0.35	
120-82-1	1,2,4-Trichlorobenzene	ND	3.4	ND	0.46	
91-20-3	Naphthalene	ND	3.4	ND	0.65	
87-68-3	Hexachlorobutadiene	ND	3.4	ND	0.32	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-3**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01348

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.23 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.60

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**43**	0.80	**25**	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.80	**0.42**	0.16	
74-87-3	Chloromethane	ND	0.80	ND	0.39	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.80	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.80	ND	0.31	
106-99-0	1,3-Butadiene	**1.8**	0.80	**0.83**	0.36	
74-83-9	Bromomethane	ND	0.80	ND	0.21	
75-00-3	Chloroethane	ND	0.80	ND	0.30	
64-17-5	Ethanol	**8.8**	8.0	**4.7**	4.2	
75-05-8	Acetonitrile	ND	0.80	ND	0.48	
107-02-8	Acrolein	**3.6**	3.2	**1.6**	1.4	
67-64-1	Acetone	**17**	8.0	**7.4**	3.4	
75-69-4	Trichlorofluoromethane	**1.2**	0.80	**0.22**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.0	ND	3.3	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.80	ND	0.20	
75-09-2	Methylene Chloride	**2.1**	0.80	**0.61**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.80	ND	0.26	
76-13-1	Trichlorotrifluoroethane	ND	0.80	ND	0.10	
75-15-0	Carbon Disulfide	ND	8.0	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.80	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.80	ND	0.22	
108-05-4	Vinyl Acetate	ND	8.0	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.0	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-3**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01348

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.23 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.60

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.80	ND	0.20	
141-78-6	Ethyl Acetate	**2.8**	1.6	**0.79**	0.44	
110-54-3	n-Hexane	**0.91**	0.80	**0.26**	0.23	
67-66-3	Chloroform	ND	0.80	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.80	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.80	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.80	ND	0.15	
71-43-2	Benzene	**1.4**	0.80	**0.44**	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.47	
78-87-5	1,2-Dichloropropane	ND	0.80	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.80	ND	0.12	
79-01-6	Trichloroethene	**3.6**	0.80	**0.67**	0.15	
123-91-1	1,4-Dioxane	ND	0.80	ND	0.22	
80-62-6	Methyl Methacrylate	**3.1**	1.6	**0.76**	0.39	
142-82-5	n-Heptane	ND	0.80	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.80	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.80	ND	0.15	
108-88-3	Toluene	**6.6**	0.80	**1.8**	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.80	ND	0.094	
106-93-4	1,2-Dibromoethane	ND	0.80	ND	0.10	
123-86-4	n-Butyl Acetate	**1.9**	0.80	**0.40**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-3** CAS Sample ID: P1301748-002
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01348

Initial Pressure (psig): -3.23 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.60

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.80	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.80	ND	0.12	
108-90-7	Chlorobenzene	ND	0.80	ND	0.17	
100-41-4	Ethylbenzene	**1.9**	0.80	**0.43**	0.18	
179601-23-1	m,p-Xylenes	**4.8**	1.6	**1.1**	0.37	
75-25-2	Bromoform	ND	0.80	ND	0.077	
100-42-5	Styrene	**5.0**	0.80	**1.2**	0.19	
95-47-6	o-Xylene	**1.7**	0.80	**0.40**	0.18	
111-84-2	n-Nonane	ND	0.80	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.80	ND	0.12	
98-82-8	Cumene	ND	0.80	ND	0.16	
80-56-8	alpha-Pinene	**5.8**	0.80	**1.0**	0.14	
103-65-1	n-Propylbenzene	ND	0.80	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.80	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.80	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**1.1**	0.80	**0.22**	0.16	
100-44-7	Benzyl Chloride	ND	0.80	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.80	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.80	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.80	ND	0.13	
5989-27-5	d-Limonene	**1.1**	0.80	**0.19**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	ND	0.11	
91-20-3	Naphthalene	ND	0.80	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.80	ND	0.075	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-051**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01382

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -4.33 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**8.2**	0.89	**4.8**	0.52	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.7**	0.89	**0.34**	0.18	
74-87-3	Chloromethane	ND	0.89	ND	0.43	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.89	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.89	ND	0.35	
106-99-0	1,3-Butadiene	**2.7**	0.89	**1.2**	0.40	
74-83-9	Bromomethane	ND	0.89	ND	0.23	
75-00-3	Chloroethane	ND	0.89	ND	0.34	
64-17-5	Ethanol	**45**	8.9	**24**	4.7	
75-05-8	Acetonitrile	**6.7**	0.89	**4.0**	0.53	
107-02-8	Acrolein	ND	3.6	ND	1.6	
67-64-1	Acetone	**360**	8.9	**150**	3.7	
75-69-4	Trichlorofluoromethane	**1.0**	0.89	**0.18**	0.16	
67-63-0	2-Propanol (Isopropyl Alcohol)	**21**	8.9	**8.7**	3.6	
107-13-1	Acrylonitrile	ND	0.89	ND	0.41	
75-35-4	1,1-Dichloroethene	ND	0.89	ND	0.22	
75-09-2	Methylene Chloride	ND	0.89	ND	0.26	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.89	ND	0.28	
76-13-1	Trichlorotrifluoroethane	ND	0.89	ND	0.12	
75-15-0	Carbon Disulfide	**51**	8.9	**17**	2.9	
156-60-5	trans-1,2-Dichloroethene	ND	0.89	ND	0.22	
75-34-3	1,1-Dichloroethane	ND	0.89	ND	0.22	
1634-04-4	Methyl tert-Butyl Ether	ND	0.89	ND	0.25	
108-05-4	Vinyl Acetate	ND	8.9	ND	2.5	
78-93-3	2-Butanone (MEK)	**51**	8.9	**17**	3.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-051**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01382

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -4.33 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.89	ND	0.22	
141-78-6	Ethyl Acetate	ND	1.8	ND	0.49	
110-54-3	n-Hexane	**230**	8.9	**64**	2.5	**D**
67-66-3	Chloroform	ND	0.89	ND	0.18	
109-99-9	Tetrahydrofuran (THF)	ND	0.89	ND	0.30	
107-06-2	1,2-Dichloroethane	ND	0.89	ND	0.22	
71-55-6	1,1,1-Trichloroethane	**6.3**	0.89	**1.2**	0.16	
71-43-2	Benzene	**36**	0.89	**11**	0.28	
56-23-5	Carbon Tetrachloride	**1.4**	0.89	**0.23**	0.14	
110-82-7	Cyclohexane	**86**	1.8	**25**	0.52	
78-87-5	1,2-Dichloropropane	ND	0.89	ND	0.19	
75-27-4	Bromodichloromethane	ND	0.89	ND	0.13	
79-01-6	Trichloroethene	**150**	0.89	**28**	0.17	
123-91-1	1,4-Dioxane	ND	0.89	ND	0.25	
80-62-6	Methyl Methacrylate	ND	1.8	ND	0.43	
142-82-5	n-Heptane	**210**	8.9	**52**	2.2	**D**
10061-01-5	cis-1,3-Dichloropropene	ND	0.89	ND	0.20	
108-10-1	4-Methyl-2-pentanone	**4.8**	0.89	**1.2**	0.22	
10061-02-6	trans-1,3-Dichloropropene	ND	0.89	ND	0.20	
79-00-5	1,1,2-Trichloroethane	ND	0.89	ND	0.16	
108-88-3	Toluene	**160**	0.89	**43**	0.24	
591-78-6	2-Hexanone	ND	0.89	ND	0.22	
124-48-1	Dibromochloromethane	ND	0.89	ND	0.10	
106-93-4	1,2-Dibromoethane	ND	0.89	ND	0.12	
123-86-4	n-Butyl Acetate	ND	0.89	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **SS-8hr-051** CAS Sample ID: P1301748-003
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01382

Initial Pressure (psig): -4.33 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**130**	0.89	**29**	0.19	
127-18-4	Tetrachloroethene	**2.8**	0.89	**0.41**	0.13	
108-90-7	Chlorobenzene	ND	0.89	ND	0.19	
100-41-4	Ethylbenzene	**7.6**	0.89	**1.8**	0.20	
179601-23-1	m,p-Xylenes	**33**	1.8	**7.6**	0.41	
75-25-2	Bromoform	ND	0.89	ND	0.086	
100-42-5	Styrene	**0.95**	0.89	**0.22**	0.21	
95-47-6	o-Xylene	**12**	0.89	**2.7**	0.20	
111-84-2	n-Nonane	**70**	0.89	**13**	0.17	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.89	ND	0.13	
98-82-8	Cumene	**1.5**	0.89	**0.30**	0.18	
80-56-8	alpha-Pinene	**6.3**	0.89	**1.1**	0.16	
103-65-1	n-Propylbenzene	**1.3**	0.89	**0.26**	0.18	
622-96-8	4-Ethyltoluene	**1.2**	0.89	**0.24**	0.18	
108-67-8	1,3,5-Trimethylbenzene	**3.5**	0.89	**0.71**	0.18	
95-63-6	1,2,4-Trimethylbenzene	**5.0**	0.89	**1.0**	0.18	
100-44-7	Benzyl Chloride	ND	0.89	ND	0.17	
541-73-1	1,3-Dichlorobenzene	ND	0.89	ND	0.15	
106-46-7	1,4-Dichlorobenzene	ND	0.89	ND	0.15	
95-50-1	1,2-Dichlorobenzene	ND	0.89	ND	0.15	
5989-27-5	d-Limonene	**1.8**	0.89	**0.32**	0.16	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.89	ND	0.092	
120-82-1	1,2,4-Trichlorobenzene	ND	0.89	ND	0.12	
91-20-3	Naphthalene	ND	0.89	ND	0.17	
87-68-3	Hexachlorobutadiene	ND	0.89	ND	0.083	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00876

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -2.72 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**8.8**	1.5	**5.1**	0.88	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.8**	1.5	**0.36**	0.31	
74-87-3	Chloromethane	ND	1.5	ND	0.74	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.5	ND	0.22	
75-01-4	Vinyl Chloride	ND	1.5	ND	0.59	
106-99-0	1,3-Butadiene	**2.4**	1.5	**1.1**	0.69	
74-83-9	Bromomethane	ND	1.5	ND	0.39	
75-00-3	Chloroethane	ND	1.5	ND	0.58	
64-17-5	Ethanol	**16**	15	**8.4**	8.1	
75-05-8	Acetonitrile	**13**	1.5	**7.7**	0.91	
107-02-8	Acrolein	ND	6.1	ND	2.7	
67-64-1	Acetone	**230**	15	**99**	6.4	
75-69-4	Trichlorofluoromethane	ND	1.5	ND	0.27	
67-63-0	2-Propanol (Isopropyl Alcohol)	**16**	15	**6.7**	6.2	
107-13-1	Acrylonitrile	ND	1.5	ND	0.70	
75-35-4	1,1-Dichloroethene	ND	1.5	ND	0.38	
75-09-2	Methylene Chloride	ND	1.5	ND	0.44	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.5	ND	0.49	
76-13-1	Trichlorotrifluoroethane	ND	1.5	ND	0.20	
75-15-0	Carbon Disulfide	**18**	15	**5.7**	4.9	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	ND	0.38	
75-34-3	1,1-Dichloroethane	ND	1.5	ND	0.38	
1634-04-4	Methyl tert-Butyl Ether	ND	1.5	ND	0.42	
108-05-4	Vinyl Acetate	ND	15	ND	4.3	
78-93-3	2-Butanone (MEK)	**36**	15	**12**	5.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00876

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -2.72 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.5	ND	0.38	
141-78-6	Ethyl Acetate	ND	3.0	ND	0.84	
110-54-3	n-Hexane	**130**	1.5	**38**	0.43	
67-66-3	Chloroform	ND	1.5	ND	0.31	
109-99-9	Tetrahydrofuran (THF)	**1.6**	1.5	**0.54**	0.52	
107-06-2	1,2-Dichloroethane	ND	1.5	ND	0.38	
71-55-6	1,1,1-Trichloroethane	ND	1.5	ND	0.28	
71-43-2	Benzene	**35**	1.5	**11**	0.48	
56-23-5	Carbon Tetrachloride	ND	1.5	ND	0.24	
110-82-7	Cyclohexane	**52**	3.0	**15**	0.88	
78-87-5	1,2-Dichloropropane	ND	1.5	ND	0.33	
75-27-4	Bromodichloromethane	ND	1.5	ND	0.23	
79-01-6	Trichloroethene	**22**	1.5	**4.1**	0.28	
123-91-1	1,4-Dioxane	ND	1.5	ND	0.42	
80-62-6	Methyl Methacrylate	ND	3.0	ND	0.74	
142-82-5	n-Heptane	**130**	1.5	**32**	0.37	
10061-01-5	cis-1,3-Dichloropropene	ND	1.5	ND	0.33	
108-10-1	4-Methyl-2-pentanone	**3.8**	1.5	**0.92**	0.37	
10061-02-6	trans-1,3-Dichloropropene	ND	1.5	ND	0.33	
79-00-5	1,1,2-Trichloroethane	ND	1.5	ND	0.28	
108-88-3	Toluene	**130**	1.5	**34**	0.40	
591-78-6	2-Hexanone	ND	1.5	ND	0.37	
124-48-1	Dibromochloromethane	ND	1.5	ND	0.18	
106-93-4	1,2-Dibromoethane	ND	1.5	ND	0.20	
123-86-4	n-Butyl Acetate	ND	1.5	ND	0.32	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **SS-8hr-052** CAS Sample ID: P1301748-004
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: AC00876

Initial Pressure (psig): -2.72 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**88**	1.5	**19**	0.33	
127-18-4	Tetrachloroethene	**3.4**	1.5	**0.51**	0.22	
108-90-7	Chlorobenzene	ND	1.5	ND	0.33	
100-41-4	Ethylbenzene	**39**	1.5	**9.1**	0.35	
179601-23-1	m,p-Xylenes	**74**	3.0	**17**	0.70	
75-25-2	Bromoform	ND	1.5	ND	0.15	
100-42-5	Styrene	**2.2**	1.5	**0.53**	0.36	
95-47-6	o-Xylene	**26**	1.5	**6.1**	0.35	
111-84-2	n-Nonane	**37**	1.5	**7.1**	0.29	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.5	ND	0.22	
98-82-8	Cumene	**290**	1.5	**59**	0.31	
80-56-8	alpha-Pinene	ND	1.5	ND	0.27	
103-65-1	n-Propylbenzene	**3.9**	1.5	**0.80**	0.31	
622-96-8	4-Ethyltoluene	**2.7**	1.5	**0.54**	0.31	
108-67-8	1,3,5-Trimethylbenzene	**3.6**	1.5	**0.74**	0.31	
95-63-6	1,2,4-Trimethylbenzene	**9.1**	1.5	**1.9**	0.31	
100-44-7	Benzyl Chloride	ND	1.5	ND	0.29	
541-73-1	1,3-Dichlorobenzene	ND	1.5	ND	0.25	
106-46-7	1,4-Dichlorobenzene	ND	1.5	ND	0.25	
95-50-1	1,2-Dichlorobenzene	ND	1.5	ND	0.25	
5989-27-5	d-Limonene	**160**	1.5	**29**	0.27	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.5	ND	0.16	
120-82-1	1,2,4-Trichlorobenzene	ND	1.5	ND	0.20	
91-20-3	Naphthalene	**2.2**	1.5	**0.42**	0.29	
87-68-3	Hexachlorobutadiene	ND	1.5	ND	0.14	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-051**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AS00384

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.77 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**8.9**	0.77	**5.1**	0.45	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.7**	0.77	**0.55**	0.16	
74-87-3	Chloromethane	**0.83**	0.77	**0.40**	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.77	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.77	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.77	ND	0.35	
74-83-9	Bromomethane	ND	0.77	ND	0.20	
75-00-3	Chloroethane	ND	0.77	ND	0.29	
64-17-5	Ethanol	**99**	7.7	**52**	4.1	
75-05-8	Acetonitrile	**0.98**	0.77	**0.58**	0.46	
107-02-8	Acrolein	ND	3.1	ND	1.3	
67-64-1	Acetone	**47**	7.7	**20**	3.2	
75-69-4	Trichlorofluoromethane	**1.4**	0.77	**0.25**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	**88**	7.7	**36**	3.1	
107-13-1	Acrylonitrile	ND	0.77	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.77	ND	0.19	
75-09-2	Methylene Chloride	**1.6**	0.77	**0.46**	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.77	ND	0.25	
76-13-1	Trichlorotrifluoroethane	ND	0.77	ND	0.10	
75-15-0	Carbon Disulfide	ND	7.7	ND	2.5	
156-60-5	trans-1,2-Dichloroethene	ND	0.77	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.77	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.77	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.7	ND	2.2	
78-93-3	2-Butanone (MEK)	**15**	7.7	**5.0**	2.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-051**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AS00384

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.77 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.77	ND	0.19	
141-78-6	Ethyl Acetate	**30**	1.5	**8.3**	0.43	
110-54-3	n-Hexane	**1.2**	0.77	**0.35**	0.22	
67-66-3	Chloroform	ND	0.77	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.77	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.77	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.77	ND	0.14	
71-43-2	Benzene	ND	0.77	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.77	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.77	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.77	ND	0.11	
79-01-6	Trichloroethene	**1.1**	0.77	**0.21**	0.14	
123-91-1	1,4-Dioxane	ND	0.77	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.38	
142-82-5	n-Heptane	**1.2**	0.77	**0.29**	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.77	ND	0.17	
108-10-1	4-Methyl-2-pentanone	**3.1**	0.77	**0.77**	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.77	ND	0.14	
108-88-3	Toluene	**3.9**	0.77	**1.0**	0.20	
591-78-6	2-Hexanone	**1.1**	0.77	**0.28**	0.19	
124-48-1	Dibromochloromethane	ND	0.77	ND	0.090	
106-93-4	1,2-Dibromoethane	ND	0.77	ND	0.10	
123-86-4	n-Butyl Acetate	**0.78**	0.77	**0.16**	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-8hr-051** CAS Sample ID: P1301748-005
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00384

Initial Pressure (psig): -2.77 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**1.8**	0.77	**0.39**	0.16	
127-18-4	Tetrachloroethene	ND	0.77	ND	0.11	
108-90-7	Chlorobenzene	ND	0.77	ND	0.17	
100-41-4	Ethylbenzene	**1.1**	0.77	**0.25**	0.18	
179601-23-1	m,p-Xylenes	**2.2**	1.5	**0.52**	0.35	
75-25-2	Bromoform	ND	0.77	ND	0.075	
100-42-5	Styrene	**2.5**	0.77	**0.59**	0.18	
95-47-6	o-Xylene	**0.84**	0.77	**0.19**	0.18	
111-84-2	n-Nonane	ND	0.77	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.77	ND	0.11	
98-82-8	Cumene	ND	0.77	ND	0.16	
80-56-8	alpha-Pinene	**2.7**	0.77	**0.48**	0.14	
103-65-1	n-Propylbenzene	ND	0.77	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.77	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.77	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.77	ND	0.16	
100-44-7	Benzyl Chloride	ND	0.77	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.77	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.77	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.77	ND	0.13	
5989-27-5	d-Limonene	ND	0.77	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.77	ND	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	ND	0.10	
91-20-3	Naphthalene	ND	0.77	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.77	ND	0.072	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01159

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.74 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**26**	0.92	**15**	0.53	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	0.92	**0.48**	0.19	
74-87-3	Chloromethane	ND	0.92	ND	0.45	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.92	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.92	ND	0.36	
106-99-0	1,3-Butadiene	**1.0**	0.92	**0.47**	0.42	
74-83-9	Bromomethane	ND	0.92	ND	0.24	
75-00-3	Chloroethane	ND	0.92	ND	0.35	
64-17-5	Ethanol	**22**	9.2	**12**	4.9	
75-05-8	Acetonitrile	ND	0.92	ND	0.55	
107-02-8	Acrolein	ND	3.7	ND	1.6	
67-64-1	Acetone	**25**	9.2	**11**	3.9	
75-69-4	Trichlorofluoromethane	**1.2**	0.92	**0.22**	0.16	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	9.2	ND	3.7	
107-13-1	Acrylonitrile	ND	0.92	ND	0.42	
75-35-4	1,1-Dichloroethene	ND	0.92	ND	0.23	
75-09-2	Methylene Chloride	**4.6**	0.92	**1.3**	0.26	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.92	ND	0.29	
76-13-1	Trichlorotrifluoroethane	ND	0.92	ND	0.12	
75-15-0	Carbon Disulfide	ND	9.2	ND	3.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.92	ND	0.23	
75-34-3	1,1-Dichloroethane	ND	0.92	ND	0.23	
1634-04-4	Methyl tert-Butyl Ether	ND	0.92	ND	0.26	
108-05-4	Vinyl Acetate	ND	9.2	ND	2.6	
78-93-3	2-Butanone (MEK)	ND	9.2	ND	3.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01159

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.74 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.92	ND	0.23	
141-78-6	Ethyl Acetate	**2.8**	1.8	**0.79**	0.51	
110-54-3	n-Hexane	**2.3**	0.92	**0.67**	0.26	
67-66-3	Chloroform	ND	0.92	ND	0.19	
109-99-9	Tetrahydrofuran (THF)	ND	0.92	ND	0.31	
107-06-2	1,2-Dichloroethane	ND	0.92	ND	0.23	
71-55-6	1,1,1-Trichloroethane	ND	0.92	ND	0.17	
71-43-2	Benzene	**1.2**	0.92	**0.38**	0.29	
56-23-5	Carbon Tetrachloride	ND	0.92	ND	0.15	
110-82-7	Cyclohexane	ND	1.8	ND	0.53	
78-87-5	1,2-Dichloropropane	ND	0.92	ND	0.20	
75-27-4	Bromodichloromethane	ND	0.92	ND	0.14	
79-01-6	Trichloroethene	**3.1**	0.92	**0.58**	0.17	
123-91-1	1,4-Dioxane	ND	0.92	ND	0.26	
80-62-6	Methyl Methacrylate	**5.5**	1.8	**1.3**	0.45	
142-82-5	n-Heptane	**1.5**	0.92	**0.36**	0.22	
10061-01-5	cis-1,3-Dichloropropene	ND	0.92	ND	0.20	
108-10-1	4-Methyl-2-pentanone	ND	0.92	ND	0.22	
10061-02-6	trans-1,3-Dichloropropene	ND	0.92	ND	0.20	
79-00-5	1,1,2-Trichloroethane	ND	0.92	ND	0.17	
108-88-3	Toluene	**8.9**	0.92	**2.4**	0.24	
591-78-6	2-Hexanone	ND	0.92	ND	0.22	
124-48-1	Dibromochloromethane	ND	0.92	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	0.92	ND	0.12	
123-86-4	n-Butyl Acetate	**3.5**	0.92	**0.73**	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-8hr-052** CAS Sample ID: P1301748-006
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/19/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01159

Initial Pressure (psig): -4.74 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.92	ND	0.20	
127-18-4	Tetrachloroethene	ND	0.92	ND	0.14	
108-90-7	Chlorobenzene	ND	0.92	ND	0.20	
100-41-4	Ethylbenzene	**3.0**	0.92	**0.70**	0.21	
179601-23-1	m,p-Xylenes	**6.4**	1.8	**1.5**	0.42	
75-25-2	Bromoform	ND	0.92	ND	0.089	
100-42-5	Styrene	**10**	0.92	**2.3**	0.22	
95-47-6	o-Xylene	**2.3**	0.92	**0.54**	0.21	
111-84-2	n-Nonane	ND	0.92	ND	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.92	ND	0.13	
98-82-8	Cumene	ND	0.92	ND	0.19	
80-56-8	alpha-Pinene	**8.2**	0.92	**1.5**	0.17	
103-65-1	n-Propylbenzene	ND	0.92	ND	0.19	
622-96-8	4-Ethyltoluene	ND	0.92	ND	0.19	
108-67-8	1,3,5-Trimethylbenzene	ND	0.92	ND	0.19	
95-63-6	1,2,4-Trimethylbenzene	**1.1**	0.92	**0.22**	0.19	
100-44-7	Benzyl Chloride	ND	0.92	ND	0.18	
541-73-1	1,3-Dichlorobenzene	ND	0.92	ND	0.15	
106-46-7	1,4-Dichlorobenzene	ND	0.92	ND	0.15	
95-50-1	1,2-Dichlorobenzene	ND	0.92	ND	0.15	
5989-27-5	d-Limonene	**1.4**	0.92	**0.26**	0.17	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.92	ND	0.095	
120-82-1	1,2,4-Trichlorobenzene	ND	0.92	ND	0.12	
91-20-3	Naphthalene	ND	0.92	ND	0.18	
87-68-3	Hexachlorobutadiene	ND	0.92	ND	0.086	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-056**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01305

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.10 Final Pressure (psig): 3.78

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.80	ND	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.7**	0.80	**0.55**	0.16	
74-87-3	Chloromethane	**0.88**	0.80	**0.43**	0.39	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.80	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.80	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.80	ND	0.36	
74-83-9	Bromomethane	ND	0.80	ND	0.20	
75-00-3	Chloroethane	ND	0.80	ND	0.30	
64-17-5	Ethanol	ND	8.0	ND	4.2	
75-05-8	Acetonitrile	ND	0.80	ND	0.47	
107-02-8	Acrolein	ND	3.2	ND	1.4	
67-64-1	Acetone	**14**	8.0	**5.7**	3.3	
75-69-4	Trichlorofluoromethane	**1.5**	0.80	**0.26**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.0	ND	3.2	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.80	ND	0.20	
75-09-2	Methylene Chloride	**5.0**	0.80	**1.4**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.80	ND	0.25	
76-13-1	Trichlorotrifluoroethane	ND	0.80	ND	0.10	
75-15-0	Carbon Disulfide	ND	8.0	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.80	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.80	ND	0.22	
108-05-4	Vinyl Acetate	ND	8.0	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.0	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-056**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01305

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.10 Final Pressure (psig): 3.78

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.80	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.44	
110-54-3	n-Hexane	ND	0.80	ND	0.23	
67-66-3	Chloroform	ND	0.80	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.80	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.80	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.80	ND	0.15	
71-43-2	Benzene	ND	0.80	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.80	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.80	ND	0.12	
79-01-6	Trichloroethene	**33**	0.80	**6.2**	0.15	
123-91-1	1,4-Dioxane	ND	0.80	ND	0.22	
80-62-6	Methyl Methacrylate	**3.4**	1.6	**0.82**	0.39	
142-82-5	n-Heptane	ND	0.80	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.80	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.80	ND	0.15	
108-88-3	Toluene	**6.5**	0.80	**1.7**	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.80	ND	0.093	
106-93-4	1,2-Dibromoethane	ND	0.80	ND	0.10	
123-86-4	n-Butyl Acetate	**1.1**	0.80	**0.23**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-8hr-056** CAS Sample ID: P1301748-008
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01305

Initial Pressure (psig): -3.10 Final Pressure (psig): 3.78

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.80	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.80	ND	0.12	
108-90-7	Chlorobenzene	ND	0.80	ND	0.17	
100-41-4	Ethylbenzene	**1.8**	0.80	**0.42**	0.18	
179601-23-1	m,p-Xylenes	**4.6**	1.6	**1.1**	0.37	
75-25-2	Bromoform	ND	0.80	ND	0.077	
100-42-5	Styrene	**5.4**	0.80	**1.3**	0.19	
95-47-6	o-Xylene	**1.6**	0.80	**0.36**	0.18	
111-84-2	n-Nonane	ND	0.80	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.80	ND	0.12	
98-82-8	Cumene	ND	0.80	ND	0.16	
80-56-8	alpha-Pinene	**4.2**	0.80	**0.75**	0.14	
103-65-1	n-Propylbenzene	ND	0.80	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.80	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.80	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.80	ND	0.16	
100-44-7	Benzyl Chloride	ND	0.80	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.80	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.80	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.80	ND	0.13	
5989-27-5	d-Limonene	ND	0.80	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	ND	0.11	
91-20-3	Naphthalene	ND	0.80	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.80	ND	0.075	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-053**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01901

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 0.050 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**29**	15	**17**	8.5	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	15	ND	3.0	
74-87-3	Chloromethane	ND	15	ND	7.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	15	ND	2.1	
75-01-4	Vinyl Chloride	ND	15	ND	5.8	
106-99-0	1,3-Butadiene	ND	15	ND	6.6	
74-83-9	Bromomethane	ND	15	ND	3.8	
75-00-3	Chloroethane	ND	15	ND	5.6	
64-17-5	Ethanol	ND	150	ND	78	
75-05-8	Acetonitrile	ND	15	ND	8.8	
107-02-8	Acrolein	ND	59	ND	26	
67-64-1	Acetone	**600**	150	**250**	62	
75-69-4	Trichlorofluoromethane	ND	15	ND	2.6	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	150	ND	60	
107-13-1	Acrylonitrile	ND	15	ND	6.8	
75-35-4	1,1-Dichloroethene	ND	15	ND	3.7	
75-09-2	Methylene Chloride	ND	15	ND	4.2	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	15	ND	4.7	
76-13-1	Trichlorotrifluoroethane	ND	15	ND	1.9	
75-15-0	Carbon Disulfide	ND	150	ND	47	
156-60-5	trans-1,2-Dichloroethene	ND	15	ND	3.7	
75-34-3	1,1-Dichloroethane	ND	15	ND	3.6	
1634-04-4	Methyl tert-Butyl Ether	ND	15	ND	4.1	
108-05-4	Vinyl Acetate	ND	150	ND	42	
78-93-3	2-Butanone (MEK)	ND	150	ND	50	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-053**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01901

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 0.050 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	15	ND	3.7	
141-78-6	Ethyl Acetate	ND	29	ND	8.2	
110-54-3	n-Hexane	**2,200**	15	**620**	4.2	
67-66-3	Chloroform	ND	15	ND	3.0	
109-99-9	Tetrahydrofuran (THF)	ND	15	ND	5.0	
107-06-2	1,2-Dichloroethane	ND	15	ND	3.6	
71-55-6	1,1,1-Trichloroethane	ND	15	ND	2.7	
71-43-2	Benzene	**210**	15	**65**	4.6	
56-23-5	Carbon Tetrachloride	ND	15	ND	2.3	
110-82-7	Cyclohexane	**2,100**	29	**610**	8.5	
78-87-5	1,2-Dichloropropane	ND	15	ND	3.2	
75-27-4	Bromodichloromethane	ND	15	ND	2.2	
79-01-6	Trichloroethene	**950**	15	**180**	2.7	
123-91-1	1,4-Dioxane	ND	15	ND	4.1	
80-62-6	Methyl Methacrylate	ND	29	ND	7.2	
142-82-5	n-Heptane	**2,300**	15	**560**	3.6	
10061-01-5	cis-1,3-Dichloropropene	ND	15	ND	3.2	
108-10-1	4-Methyl-2-pentanone	ND	15	ND	3.6	
10061-02-6	trans-1,3-Dichloropropene	ND	15	ND	3.2	
79-00-5	1,1,2-Trichloroethane	ND	15	ND	2.7	
108-88-3	Toluene	**540**	15	**140**	3.9	
591-78-6	2-Hexanone	ND	15	ND	3.6	
124-48-1	Dibromochloromethane	ND	15	ND	1.7	
106-93-4	1,2-Dibromoethane	ND	15	ND	1.9	
123-86-4	n-Butyl Acetate	ND	15	ND	3.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **SS-8hr-053** CAS Sample ID: P1301748-009
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:
Container ID: AC01901

Initial Pressure (psig): -2.26 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**1,600**	15	**330**	3.1	
127-18-4	Tetrachloroethene	ND	15	ND	2.2	
108-90-7	Chlorobenzene	ND	15	ND	3.2	
100-41-4	Ethylbenzene	**100**	15	**23**	3.4	
179601-23-1	m,p-Xylenes	**320**	29	**73**	6.8	
75-25-2	Bromoform	ND	15	ND	1.4	
100-42-5	Styrene	ND	15	ND	3.5	
95-47-6	o-Xylene	**94**	15	**22**	3.4	
111-84-2	n-Nonane	**560**	15	**110**	2.8	
79-34-5	1,1,2,2-Tetrachloroethane	ND	15	ND	2.1	
98-82-8	Cumene	**520**	15	**100**	3.0	
80-56-8	alpha-Pinene	ND	15	ND	2.6	
103-65-1	n-Propylbenzene	ND	15	ND	3.0	
622-96-8	4-Ethyltoluene	ND	15	ND	3.0	
108-67-8	1,3,5-Trimethylbenzene	ND	15	ND	3.0	
95-63-6	1,2,4-Trimethylbenzene	ND	15	ND	3.0	
100-44-7	Benzyl Chloride	ND	15	ND	2.8	
541-73-1	1,3-Dichlorobenzene	ND	15	ND	2.4	
106-46-7	1,4-Dichlorobenzene	ND	15	ND	2.4	
95-50-1	1,2-Dichlorobenzene	ND	15	ND	2.4	
5989-27-5	d-Limonene	**160**	15	**29**	2.6	
96-12-8	1,2-Dibromo-3-chloropropane	ND	15	ND	1.5	
120-82-1	1,2,4-Trichlorobenzene	ND	15	ND	2.0	
91-20-3	Naphthalene	ND	15	ND	2.8	
87-68-3	Hexachlorobutadiene	ND	15	ND	1.4	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-053**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00915

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.61 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.76	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.76	**0.47**	0.15	
74-87-3	Chloromethane	ND	0.76	ND	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.76	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.76	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.76	ND	0.34	
74-83-9	Bromomethane	ND	0.76	ND	0.20	
75-00-3	Chloroethane	ND	0.76	ND	0.29	
64-17-5	Ethanol	**8.7**	7.6	**4.6**	4.0	
75-05-8	Acetonitrile	ND	0.76	ND	0.45	
107-02-8	Acrolein	ND	3.0	ND	1.3	
67-64-1	Acetone	**7.9**	7.6	**3.3**	3.2	
75-69-4	Trichlorofluoromethane	**1.1**	0.76	**0.20**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.6	ND	3.1	
107-13-1	Acrylonitrile	ND	0.76	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.76	ND	0.19	
75-09-2	Methylene Chloride	**1.3**	0.76	**0.38**	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.76	ND	0.24	
76-13-1	Trichlorotrifluoroethane	ND	0.76	ND	0.099	
75-15-0	Carbon Disulfide	ND	7.6	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.76	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.76	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.76	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.6	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	7.6	ND	2.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-053**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00915

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.61 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.76	ND	0.19	
141-78-6	Ethyl Acetate	ND	1.5	ND	0.42	
110-54-3	n-Hexane	ND	0.76	ND	0.22	
67-66-3	Chloroform	ND	0.76	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.76	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.76	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.76	ND	0.14	
71-43-2	Benzene	ND	0.76	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.76	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.44	
78-87-5	1,2-Dichloropropane	ND	0.76	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.76	ND	0.11	
79-01-6	Trichloroethene	**1.8**	0.76	**0.33**	0.14	
123-91-1	1,4-Dioxane	ND	0.76	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.37	
142-82-5	n-Heptane	ND	0.76	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.76	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.76	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.76	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.76	ND	0.14	
108-88-3	Toluene	**2.1**	0.76	**0.56**	0.20	
591-78-6	2-Hexanone	ND	0.76	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.76	ND	0.089	
106-93-4	1,2-Dibromoethane	ND	0.76	ND	0.099	
123-86-4	n-Butyl Acetate	ND	0.76	ND	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-8hr-053** CAS Sample ID: P1301748-010
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00915

Initial Pressure (psig): -2.61 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.76	ND	0.16	
127-18-4	Tetrachloroethene	ND	0.76	ND	0.11	
108-90-7	Chlorobenzene	ND	0.76	ND	0.17	
100-41-4	Ethylbenzene	ND	0.76	ND	0.18	
179601-23-1	m,p-Xylenes	ND	1.5	ND	0.35	
75-25-2	Bromoform	ND	0.76	ND	0.074	
100-42-5	Styrene	**1.5**	0.76	**0.36**	0.18	
95-47-6	o-Xylene	ND	0.76	ND	0.18	
111-84-2	n-Nonane	ND	0.76	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.76	ND	0.11	
98-82-8	Cumene	ND	0.76	ND	0.15	
80-56-8	alpha-Pinene	**0.94**	0.76	**0.17**	0.14	
103-65-1	n-Propylbenzene	ND	0.76	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.76	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.76	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	ND	0.76	ND	0.15	
100-44-7	Benzyl Chloride	ND	0.76	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.76	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.76	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.76	ND	0.13	
5989-27-5	d-Limonene	**3.2**	0.76	**0.58**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.76	ND	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.76	ND	0.10	
91-20-3	Naphthalene	ND	0.76	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.76	ND	0.071	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-054**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01363

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)
0.15 Liter(s)

Initial Pressure (psig): -3.70 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**5.5**	0.83	**3.2**	0.48	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.8**	0.83	**0.36**	0.17	
74-87-3	Chloromethane	ND	0.83	ND	0.40	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.83	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.83	ND	0.32	
106-99-0	1,3-Butadiene	**0.93**	0.83	**0.42**	0.38	
74-83-9	Bromomethane	ND	0.83	ND	0.21	
75-00-3	Chloroethane	ND	0.83	ND	0.31	
64-17-5	Ethanol	**14**	8.3	**7.2**	4.4	
75-05-8	Acetonitrile	**5.7**	0.83	**3.4**	0.49	
107-02-8	Acrolein	ND	3.3	ND	1.4	
67-64-1	Acetone	**81**	8.3	**34**	3.5	
75-69-4	Trichlorofluoromethane	**1.1**	0.83	**0.20**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.3	ND	3.4	
107-13-1	Acrylonitrile	ND	0.83	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.83	ND	0.21	
75-09-2	Methylene Chloride	**1.0**	0.83	**0.30**	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.83	ND	0.27	
76-13-1	Trichlorotrifluoroethane	ND	0.83	ND	0.11	
75-15-0	Carbon Disulfide	**22**	8.3	**7.1**	2.7	
156-60-5	trans-1,2-Dichloroethene	ND	0.83	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.83	ND	0.21	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.3	ND	2.4	
78-93-3	2-Butanone (MEK)	**15**	8.3	**5.0**	2.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-054**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01363

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)
0.15 Liter(s)

Initial Pressure (psig): -3.70 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.83	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.46	
110-54-3	n-Hexane	**110**	0.83	**31**	0.24	
67-66-3	Chloroform	ND	0.83	ND	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.83	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.83	ND	0.21	
71-55-6	1,1,1-Trichloroethane	**2.0**	0.83	**0.37**	0.15	
71-43-2	Benzene	**22**	0.83	**6.7**	0.26	
56-23-5	Carbon Tetrachloride	ND	0.83	ND	0.13	
110-82-7	Cyclohexane	**42**	1.7	**12**	0.48	
78-87-5	1,2-Dichloropropane	ND	0.83	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.83	ND	0.12	
79-01-6	Trichloroethene	**28**	0.83	**5.2**	0.15	
123-91-1	1,4-Dioxane	**6.0**	0.83	**1.7**	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.41	
142-82-5	n-Heptane	**100**	0.83	**25**	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	ND	0.18	
108-10-1	4-Methyl-2-pentanone	**1.3**	0.83	**0.31**	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.83	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.83	ND	0.15	
108-88-3	Toluene	**230**	5.5	**62**	1.5	**D**
591-78-6	2-Hexanone	ND	0.83	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.83	ND	0.097	
106-93-4	1,2-Dibromoethane	ND	0.83	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.83	ND	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **SS-8hr-054** CAS Sample ID: P1301748-011
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.15 Liter(s)
Container ID: AC01363

Initial Pressure (psig): -3.70 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**84**	0.83	**18**	0.18	
127-18-4	Tetrachloroethene	**2.9**	0.83	**0.42**	0.12	
108-90-7	Chlorobenzene	ND	0.83	ND	0.18	
100-41-4	Ethylbenzene	**7.3**	0.83	**1.7**	0.19	
179601-23-1	m,p-Xylenes	**33**	1.7	**7.5**	0.38	
75-25-2	Bromoform	ND	0.83	ND	0.080	
100-42-5	Styrene	**1.5**	0.83	**0.36**	0.20	
95-47-6	o-Xylene	**12**	0.83	**2.9**	0.19	
111-84-2	n-Nonane	**66**	0.83	**13**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.83	ND	0.12	
98-82-8	Cumene	**2.0**	0.83	**0.40**	0.17	
80-56-8	alpha-Pinene	**2.2**	0.83	**0.40**	0.15	
103-65-1	n-Propylbenzene	**1.8**	0.83	**0.37**	0.17	
622-96-8	4-Ethyltoluene	**1.9**	0.83	**0.39**	0.17	
108-67-8	1,3,5-Trimethylbenzene	**5.9**	0.83	**1.2**	0.17	
95-63-6	1,2,4-Trimethylbenzene	**11**	0.83	**2.3**	0.17	
100-44-7	Benzyl Chloride	ND	0.83	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.83	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.83	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	**5.0**	0.83	**0.89**	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.83	ND	0.086	
120-82-1	1,2,4-Trichlorobenzene	ND	0.83	ND	0.11	
91-20-3	Naphthalene	ND	0.83	ND	0.16	
87-68-3	Hexachlorobutadiene	ND	0.83	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-054**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00509

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.99 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.79	ND	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.79	**0.43**	0.16	
74-87-3	Chloromethane	ND	0.79	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.79	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.79	ND	0.35	
74-83-9	Bromomethane	ND	0.79	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	**9.4**	7.9	**5.0**	4.2	
75-05-8	Acetonitrile	ND	0.79	ND	0.47	
107-02-8	Acrolein	ND	3.1	ND	1.4	
67-64-1	Acetone	**10**	7.9	**4.3**	3.3	
75-69-4	Trichlorofluoromethane	**1.2**	0.79	**0.21**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.9	ND	3.2	
107-13-1	Acrylonitrile	ND	0.79	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.79	ND	0.20	
75-09-2	Methylene Chloride	**1.4**	0.79	**0.42**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.79	ND	0.25	
76-13-1	Trichlorotrifluoroethane	ND	0.79	ND	0.10	
75-15-0	Carbon Disulfide	ND	7.9	ND	2.5	
156-60-5	trans-1,2-Dichloroethene	ND	0.79	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.79	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.9	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	7.9	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-054**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00509

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.99 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.79	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.44	
110-54-3	n-Hexane	ND	0.79	ND	0.22	
67-66-3	Chloroform	ND	0.79	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.79	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.79	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.79	ND	0.14	
71-43-2	Benzene	ND	0.79	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.79	ND	0.12	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.79	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.79	ND	0.12	
79-01-6	Trichloroethene	**2.0**	0.79	**0.37**	0.15	
123-91-1	1,4-Dioxane	ND	0.79	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.38	
142-82-5	n-Heptane	ND	0.79	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.79	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.79	ND	0.14	
108-88-3	Toluene	**4.3**	0.79	**1.2**	0.21	
591-78-6	2-Hexanone	ND	0.79	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.79	ND	0.092	
106-93-4	1,2-Dibromoethane	ND	0.79	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.79	ND	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-8hr-054** CAS Sample ID: P1301748-012
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00509

Initial Pressure (psig): -2.99 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.79	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.79	ND	0.12	
108-90-7	Chlorobenzene	ND	0.79	ND	0.17	
100-41-4	Ethylbenzene	**1.4**	0.79	**0.32**	0.18	
179601-23-1	m,p-Xylenes	**3.1**	1.6	**0.72**	0.36	
75-25-2	Bromoform	ND	0.79	ND	0.076	
100-42-5	Styrene	**3.4**	0.79	**0.79**	0.18	
95-47-6	o-Xylene	**1.0**	0.79	**0.23**	0.18	
111-84-2	n-Nonane	ND	0.79	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.79	ND	0.11	
98-82-8	Cumene	ND	0.79	ND	0.16	
80-56-8	alpha-Pinene	**1.3**	0.79	**0.23**	0.14	
103-65-1	n-Propylbenzene	ND	0.79	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.79	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.79	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.79	ND	0.16	
100-44-7	Benzyl Chloride	ND	0.79	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.79	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.79	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.79	ND	0.13	
5989-27-5	d-Limonene	**1.5**	0.79	**0.26**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	ND	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	0.79	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.79	ND	0.074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-055**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00676

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2 - 5/3/13
Volume(s) Analyzed: 0.10 Liter(s)
0.060 Liter(s)

Initial Pressure (psig): -3.20 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**13**	8.0	**7.6**	4.6	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	8.0	ND	1.6	
74-87-3	Chloromethane	ND	8.0	ND	3.9	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	8.0	ND	1.1	
75-01-4	Vinyl Chloride	ND	8.0	ND	3.1	
106-99-0	1,3-Butadiene	ND	8.0	ND	3.6	
74-83-9	Bromomethane	ND	8.0	ND	2.0	
75-00-3	Chloroethane	ND	8.0	ND	3.0	
64-17-5	Ethanol	**81**	80	**43**	42	
75-05-8	Acetonitrile	ND	8.0	ND	4.7	
107-02-8	Acrolein	ND	32	ND	14	
67-64-1	Acetone	**360**	80	**150**	33	
75-69-4	Trichlorofluoromethane	ND	8.0	ND	1.4	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	80	ND	32	
107-13-1	Acrylonitrile	ND	8.0	ND	3.7	
75-35-4	1,1-Dichloroethene	ND	8.0	ND	2.0	
75-09-2	Methylene Chloride	ND	8.0	ND	2.3	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	8.0	ND	2.5	
76-13-1	Trichlorotrifluoroethane	ND	8.0	ND	1.0	
75-15-0	Carbon Disulfide	ND	80	ND	26	
156-60-5	trans-1,2-Dichloroethene	ND	8.0	ND	2.0	
75-34-3	1,1-Dichloroethane	ND	8.0	ND	2.0	
1634-04-4	Methyl tert-Butyl Ether	ND	8.0	ND	2.2	
108-05-4	Vinyl Acetate	ND	80	ND	23	
78-93-3	2-Butanone (MEK)	ND	80	ND	27	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **SS-8hr-055**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00676

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2 - 5/3/13
Volume(s) Analyzed: 0.10 Liter(s)
0.060 Liter(s)

Initial Pressure (psig): -3.20 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**8.4**	8.0	**2.1**	2.0	
141-78-6	Ethyl Acetate	ND	16	ND	4.4	
110-54-3	n-Hexane	**1,500**	8.0	**430**	2.3	
67-66-3	Chloroform	ND	8.0	ND	1.6	
109-99-9	Tetrahydrofuran (THF)	ND	8.0	ND	2.7	
107-06-2	1,2-Dichloroethane	ND	8.0	ND	2.0	
71-55-6	1,1,1-Trichloroethane	**55**	8.0	**10**	1.5	
71-43-2	Benzene	**120**	8.0	**36**	2.5	
56-23-5	Carbon Tetrachloride	ND	8.0	ND	1.3	
110-82-7	Cyclohexane	**1,200**	16	**350**	4.6	
78-87-5	1,2-Dichloropropane	ND	8.0	ND	1.7	
75-27-4	Bromodichloromethane	ND	8.0	ND	1.2	
79-01-6	Trichloroethene	**120**	8.0	**22**	1.5	
123-91-1	1,4-Dioxane	ND	8.0	ND	2.2	
80-62-6	Methyl Methacrylate	ND	16	ND	3.9	
142-82-5	n-Heptane	**1,500**	13	**370**	3.2	**D**
10061-01-5	cis-1,3-Dichloropropene	ND	8.0	ND	1.8	
108-10-1	4-Methyl-2-pentanone	**45**	8.0	**11**	1.9	
10061-02-6	trans-1,3-Dichloropropene	ND	8.0	ND	1.8	
79-00-5	1,1,2-Trichloroethane	ND	8.0	ND	1.5	
108-88-3	Toluene	**390**	8.0	**100**	2.1	
591-78-6	2-Hexanone	ND	8.0	ND	1.9	
124-48-1	Dibromochloromethane	ND	8.0	ND	0.93	
106-93-4	1,2-Dibromoethane	ND	8.0	ND	1.0	
123-86-4	n-Butyl Acetate	ND	8.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **SS-8hr-055** CAS Sample ID: P1301748-013
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2 - 5/3/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.060 Liter(s)
Container ID: AC00676

Initial Pressure (psig): -3.20 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**1,600**	8.0	**350**	1.7	
127-18-4	Tetrachloroethene	ND	8.0	ND	1.2	
108-90-7	Chlorobenzene	ND	8.0	ND	1.7	
100-41-4	Ethylbenzene	**31**	8.0	**7.2**	1.8	
179601-23-1	m,p-Xylenes	**130**	16	**30**	3.7	
75-25-2	Bromoform	ND	8.0	ND	0.77	
100-42-5	Styrene	ND	8.0	ND	1.9	
95-47-6	o-Xylene	**37**	8.0	**8.5**	1.8	
111-84-2	n-Nonane	**570**	8.0	**110**	1.5	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.0	ND	1.2	
98-82-8	Cumene	ND	8.0	ND	1.6	
80-56-8	alpha-Pinene	**18**	8.0	**3.2**	1.4	
103-65-1	n-Propylbenzene	ND	8.0	ND	1.6	
622-96-8	4-Ethyltoluene	ND	8.0	ND	1.6	
108-67-8	1,3,5-Trimethylbenzene	ND	8.0	ND	1.6	
95-63-6	1,2,4-Trimethylbenzene	ND	8.0	ND	1.6	
100-44-7	Benzyl Chloride	ND	8.0	ND	1.5	
541-73-1	1,3-Dichlorobenzene	ND	8.0	ND	1.3	
106-46-7	1,4-Dichlorobenzene	ND	8.0	ND	1.3	
95-50-1	1,2-Dichlorobenzene	ND	8.0	ND	1.3	
5989-27-5	d-Limonene	ND	8.0	ND	1.4	
96-12-8	1,2-Dibromo-3-chloropropane	ND	8.0	ND	0.82	
120-82-1	1,2,4-Trichlorobenzene	ND	8.0	ND	1.1	
91-20-3	Naphthalene	ND	8.0	ND	1.5	
87-68-3	Hexachlorobutadiene	ND	8.0	ND	0.75	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-055**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-014

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01414

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.50 Final Pressure (psig): 3.77

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.76	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.76	**0.46**	0.15	
74-87-3	Chloromethane	ND	0.76	ND	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.76	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.76	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.76	ND	0.34	
74-83-9	Bromomethane	ND	0.76	ND	0.19	
75-00-3	Chloroethane	ND	0.76	ND	0.29	
64-17-5	Ethanol	**8.0**	7.6	**4.3**	4.0	
75-05-8	Acetonitrile	ND	0.76	ND	0.45	
107-02-8	Acrolein	ND	3.0	ND	1.3	
67-64-1	Acetone	**8.4**	7.6	**3.5**	3.2	
75-69-4	Trichlorofluoromethane	**1.1**	0.76	**0.20**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.6	ND	3.1	
107-13-1	Acrylonitrile	ND	0.76	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.76	ND	0.19	
75-09-2	Methylene Chloride	**1.2**	0.76	**0.35**	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.76	ND	0.24	
76-13-1	Trichlorotrifluoroethane	ND	0.76	ND	0.099	
75-15-0	Carbon Disulfide	ND	7.6	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.76	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.76	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.76	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.6	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	7.6	ND	2.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-055**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-014

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01414

Date Collected: 4/20/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.50 Final Pressure (psig): 3.77

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.76	ND	0.19	
141-78-6	Ethyl Acetate	ND	1.5	ND	0.42	
110-54-3	n-Hexane	ND	0.76	ND	0.21	
67-66-3	Chloroform	ND	0.76	ND	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	0.76	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.76	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.76	ND	0.14	
71-43-2	Benzene	ND	0.76	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.76	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.44	
78-87-5	1,2-Dichloropropane	ND	0.76	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.76	ND	0.11	
79-01-6	Trichloroethene	**1.6**	0.76	**0.29**	0.14	
123-91-1	1,4-Dioxane	ND	0.76	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.37	
142-82-5	n-Heptane	ND	0.76	ND	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.76	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.76	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.76	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.76	ND	0.14	
108-88-3	Toluene	**2.0**	0.76	**0.54**	0.20	
591-78-6	2-Hexanone	ND	0.76	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.76	ND	0.089	
106-93-4	1,2-Dibromoethane	ND	0.76	ND	0.098	
123-86-4	n-Butyl Acetate	ND	0.76	ND	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **IA-8hr-055** CAS Sample ID: P1301748-014
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: 4/20/13
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 4/24/13
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01414

Initial Pressure (psig): -2.50 Final Pressure (psig): 3.77

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.76	ND	0.16	
127-18-4	Tetrachloroethene	ND	0.76	ND	0.11	
108-90-7	Chlorobenzene	ND	0.76	ND	0.16	
100-41-4	Ethylbenzene	ND	0.76	ND	0.17	
179601-23-1	m,p-Xylenes	ND	1.5	ND	0.35	
75-25-2	Bromoform	ND	0.76	ND	0.073	
100-42-5	Styrene	**1.2**	0.76	**0.28**	0.18	
95-47-6	o-Xylene	ND	0.76	ND	0.17	
111-84-2	n-Nonane	ND	0.76	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.76	ND	0.11	
98-82-8	Cumene	ND	0.76	ND	0.15	
80-56-8	alpha-Pinene	ND	0.76	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.76	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.76	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.76	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	ND	0.76	ND	0.15	
100-44-7	Benzyl Chloride	ND	0.76	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.76	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.76	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.76	ND	0.13	
5989-27-5	d-Limonene	**1.4**	0.76	**0.25**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.76	ND	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	0.76	ND	0.10	
91-20-3	Naphthalene	ND	0.76	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.76	ND	0.071	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P130502-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **Method Blank** CAS Sample ID: P130502-MB
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P130502-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Client: **Energy Solutions, Inc.** CAS Project ID: P1301748
Client Sample ID: **Method Blank** CAS Sample ID: P130502-MB
Client Project ID: **Leica / 137015**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/2/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

SURROGATE SPIKE RECOVERY RESULTS

Client: **Energy Solutions, Inc.**
Client Project ID: **Leica / 137015** CAS Project ID: P1301748

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 4/19 - 4/20/13
Analyst: Wida Ang Date(s) Received: 4/24/13
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 5/2 - 5/3/13
Test Notes:

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P130502-MB	**101**	**96**	**104**	70-130	
Method Blank	P130502-MB	**102**	**98**	**109**	70-130	
Lab Control Sample	P130502-LCS	**103**	**97**	**104**	70-130	
Lab Control Sample	P130502-LCS	**101**	**96**	**107**	70-130	
SB-3	P1301748-001	**100**	**96**	**104**	70-130	
IA-3	P1301748-002	**101**	**97**	**106**	70-130	
SS-8hr-051	P1301748-003	**104**	**89**	**97**	70-130	
SS-8hr-052	P1301748-004	**102**	**95**	**103**	70-130	
IA-8hr-051	P1301748-005	**103**	**98**	**104**	70-130	
IA-8hr-052	P1301748-006	**101**	**96**	**106**	70-130	
IA-8hr-052	P1301748-006DUP	**103**	**98**	**105**	70-130	
IA-8hr-056	P1301748-008	**103**	**97**	**107**	70-130	
SS-8hr-053	P1301748-009	**103**	**93**	**101**	70-130	
IA-8hr-053	P1301748-010	**103**	**96**	**106**	70-130	
SS-8hr-054	P1301748-011	**102**	**92**	**101**	70-130	
IA-8hr-054	P1301748-012	**102**	**97**	**105**	70-130	
SS-8hr-055	P1301748-013	**112**	**91**	**93**	70-130	
IA-8hr-055	P1301748-014	**101**	**98**	**106**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/02/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	204	**215**	**105**	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	202	**185**	**92**	63-115	
74-87-3	Chloromethane	196	**192**	**98**	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	206	**188**	**91**	65-115	
75-01-4	Vinyl Chloride	200	**197**	**99**	64-122	
106-99-0	1,3-Butadiene	210	**213**	**101**	57-141	
74-83-9	Bromomethane	200	**177**	**89**	68-122	
75-00-3	Chloroethane	202	**191**	**95**	66-120	
64-17-5	Ethanol	958	**1040**	**109**	58-126	
75-05-8	Acetonitrile	202	**229**	**113**	64-136	
107-02-8	Acrolein	204	**237**	**116**	58-129	
67-64-1	Acetone	1,040	**1040**	**100**	60-114	
75-69-4	Trichlorofluoromethane	210	**183**	**87**	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	396	**398**	**101**	54-118	
107-13-1	Acrylonitrile	206	**245**	**119**	72-143	
75-35-4	1,1-Dichloroethene	218	**212**	**97**	69-119	
75-09-2	Methylene Chloride	212	**193**	**91**	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	214	**224**	**105**	59-131	
76-13-1	Trichlorotrifluoroethane	212	**201**	**95**	69-117	
75-15-0	Carbon Disulfide	208	**194**	**93**	65-115	
156-60-5	trans-1,2-Dichloroethene	202	**211**	**104**	70-126	
75-34-3	1,1-Dichloroethane	206	**203**	**99**	68-116	
1634-04-4	Methyl tert-Butyl Ether	204	**208**	**102**	69-120	
108-05-4	Vinyl Acetate	988	**1220**	**123**	58-160	
78-93-3	2-Butanone (MEK)	212	**232**	**109**	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/02/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	**217**	**101**	70-119	
141-78-6	Ethyl Acetate	412	**472**	**115**	72-129	
110-54-3	n-Hexane	206	**209**	**101**	63-115	
67-66-3	Chloroform	222	**211**	**95**	68-110	
109-99-9	Tetrahydrofuran (THF)	208	**203**	**98**	60-126	
107-06-2	1,2-Dichloroethane	208	**214**	**103**	69-118	
71-55-6	1,1,1-Trichloroethane	204	**201**	**99**	68-120	
71-43-2	Benzene	208	**196**	**94**	69-117	
56-23-5	Carbon Tetrachloride	212	**207**	**98**	65-134	
110-82-7	Cyclohexane	402	**393**	**98**	69-114	
78-87-5	1,2-Dichloropropane	204	**203**	**100**	70-116	
75-27-4	Bromodichloromethane	204	**211**	**103**	71-126	
79-01-6	Trichloroethene	198	**199**	**101**	71-119	
123-91-1	1,4-Dioxane	206	**220**	**107**	72-126	
80-62-6	Methyl Methacrylate	414	**470**	**114**	75-136	
142-82-5	n-Heptane	202	**209**	**103**	70-117	
10061-01-5	cis-1,3-Dichloropropene	196	**214**	**109**	75-132	
108-10-1	4-Methyl-2-pentanone	210	**224**	**107**	70-133	
10061-02-6	trans-1,3-Dichloropropene	218	**252**	**116**	78-136	
79-00-5	1,1,2-Trichloroethane	202	**205**	**101**	72-119	
108-88-3	Toluene	208	**186**	**89**	65-116	
591-78-6	2-Hexanone	228	**231**	**101**	62-132	
124-48-1	Dibromochloromethane	216	**214**	**99**	66-140	
106-93-4	1,2-Dibromoethane	208	**210**	**101**	69-130	
123-86-4	n-Butyl Acetate	228	**235**	**103**	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/02/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	206	**198**	**96**	66-118	
127-18-4	Tetrachloroethene	190	**169**	**89**	63-123	
108-90-7	Chlorobenzene	208	**186**	**89**	66-118	
100-41-4	Ethylbenzene	206	**191**	**93**	66-119	
179601-23-1	m,p-Xylenes	412	**375**	**91**	64-118	
75-25-2	Bromoform	216	**212**	**98**	64-140	
100-42-5	Styrene	208	**199**	**96**	68-132	
95-47-6	o-Xylene	200	**186**	**93**	65-120	
111-84-2	n-Nonane	202	**196**	**97**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	198	**188**	**95**	63-128	
98-82-8	Cumene	196	**180**	**92**	65-121	
80-56-8	alpha-Pinene	192	**174**	**91**	66-123	
103-65-1	n-Propylbenzene	198	**183**	**92**	65-121	
622-96-8	4-Ethyltoluene	204	**181**	**89**	64-122	
108-67-8	1,3,5-Trimethylbenzene	208	**186**	**89**	64-125	
95-63-6	1,2,4-Trimethylbenzene	200	**195**	**98**	64-131	
100-44-7	Benzyl Chloride	206	**196**	**95**	67-146	
541-73-1	1,3-Dichlorobenzene	206	**192**	**93**	64-130	
106-46-7	1,4-Dichlorobenzene	212	**187**	**88**	61-124	
95-50-1	1,2-Dichlorobenzene	204	**180**	**88**	63-126	
5989-27-5	d-Limonene	206	**196**	**95**	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	202	**198**	**98**	62-155	
120-82-1	1,2,4-Trichlorobenzene	200	**174**	**87**	59-146	
91-20-3	Naphthalene	178	**150**	**84**	56-143	
87-68-3	Hexachlorobutadiene	208	**168**	**81**	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/02/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	204	**199**	**98**	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	202	**184**	**91**	63-115	
74-87-3	Chloromethane	196	**189**	**96**	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	206	**190**	**92**	65-115	
75-01-4	Vinyl Chloride	200	**196**	**98**	64-122	
106-99-0	1,3-Butadiene	210	**215**	**102**	57-141	
74-83-9	Bromomethane	200	**178**	**89**	68-122	
75-00-3	Chloroethane	202	**189**	**94**	66-120	
64-17-5	Ethanol	958	**1030**	**108**	58-126	
75-05-8	Acetonitrile	202	**228**	**113**	64-136	
107-02-8	Acrolein	204	**232**	**114**	58-129	
67-64-1	Acetone	1,040	**1040**	**100**	60-114	
75-69-4	Trichlorofluoromethane	210	**185**	**88**	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	396	**428**	**108**	54-118	
107-13-1	Acrylonitrile	206	**244**	**118**	72-143	
75-35-4	1,1-Dichloroethene	218	**213**	**98**	69-119	
75-09-2	Methylene Chloride	212	**193**	**91**	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	214	**225**	**105**	59-131	
76-13-1	Trichlorotrifluoroethane	212	**201**	**95**	69-117	
75-15-0	Carbon Disulfide	208	**195**	**94**	65-115	
156-60-5	trans-1,2-Dichloroethene	202	**210**	**104**	70-126	
75-34-3	1,1-Dichloroethane	206	**202**	**98**	68-116	
1634-04-4	Methyl tert-Butyl Ether	204	**208**	**102**	69-120	
108-05-4	Vinyl Acetate	988	**1220**	**123**	58-160	
78-93-3	2-Butanone (MEK)	212	**233**	**110**	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/02/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	**216**	**101**	70-119	
141-78-6	Ethyl Acetate	412	**470**	**114**	72-129	
110-54-3	n-Hexane	206	**208**	**101**	63-115	
67-66-3	Chloroform	222	**210**	**95**	68-110	
109-99-9	Tetrahydrofuran (THF)	208	**203**	**98**	60-126	
107-06-2	1,2-Dichloroethane	208	**213**	**102**	69-118	
71-55-6	1,1,1-Trichloroethane	204	**202**	**99**	68-120	
71-43-2	Benzene	208	**196**	**94**	69-117	
56-23-5	Carbon Tetrachloride	212	**209**	**99**	65-134	
110-82-7	Cyclohexane	402	**391**	**97**	69-114	
78-87-5	1,2-Dichloropropane	204	**202**	**99**	70-116	
75-27-4	Bromodichloromethane	204	**213**	**104**	71-126	
79-01-6	Trichloroethene	198	**197**	**99**	71-119	
123-91-1	1,4-Dioxane	206	**221**	**107**	72-126	
80-62-6	Methyl Methacrylate	414	**476**	**115**	75-136	
142-82-5	n-Heptane	202	**208**	**103**	70-117	
10061-01-5	cis-1,3-Dichloropropene	196	**214**	**109**	75-132	
108-10-1	4-Methyl-2-pentanone	210	**223**	**106**	70-133	
10061-02-6	trans-1,3-Dichloropropene	218	**253**	**116**	78-136	
79-00-5	1,1,2-Trichloroethane	202	**205**	**101**	72-119	
108-88-3	Toluene	208	**186**	**89**	65-116	
591-78-6	2-Hexanone	228	**227**	**100**	62-132	
124-48-1	Dibromochloromethane	216	**212**	**98**	66-140	
106-93-4	1,2-Dibromoethane	208	**211**	**101**	69-130	
123-86-4	n-Butyl Acetate	228	**230**	**101**	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Energy Solutions, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1301748
Client Project ID: **Leica / 137015** CAS Sample ID: P130502-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Wida Ang Date Analyzed: 5/02/13
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	206	**196**	**95**	66-118	
127-18-4	Tetrachloroethene	190	**169**	**89**	63-123	
108-90-7	Chlorobenzene	208	**185**	**89**	66-118	
100-41-4	Ethylbenzene	206	**191**	**93**	66-119	
179601-23-1	m,p-Xylenes	412	**372**	**90**	64-118	
75-25-2	Bromoform	216	**210**	**97**	64-140	
100-42-5	Styrene	208	**196**	**94**	68-132	
95-47-6	o-Xylene	200	**184**	**92**	65-120	
111-84-2	n-Nonane	202	**194**	**96**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	198	**187**	**94**	63-128	
98-82-8	Cumene	196	**179**	**91**	65-121	
80-56-8	alpha-Pinene	192	**172**	**90**	66-123	
103-65-1	n-Propylbenzene	198	**183**	**92**	65-121	
622-96-8	4-Ethyltoluene	204	**181**	**89**	64-122	
108-67-8	1,3,5-Trimethylbenzene	208	**187**	**90**	64-125	
95-63-6	1,2,4-Trimethylbenzene	200	**196**	**98**	64-131	
100-44-7	Benzyl Chloride	206	**197**	**96**	67-146	
541-73-1	1,3-Dichlorobenzene	206	**194**	**94**	64-130	
106-46-7	1,4-Dichlorobenzene	212	**190**	**90**	61-124	
95-50-1	1,2-Dichlorobenzene	204	**183**	**90**	63-126	
5989-27-5	d-Limonene	206	**194**	**94**	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	202	**204**	**101**	62-155	
120-82-1	1,2,4-Trichlorobenzene	200	**188**	**94**	59-146	
91-20-3	Naphthalene	178	**165**	**93**	56-143	
87-68-3	Hexachlorobutadiene	208	**180**	**87**	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-006DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01159

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.74 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.84

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Propene	26.0	15.1	26.0	15.1	26	**0**	25	
Dichlorodifluoromethane (CFC 12)	2.37	0.479	2.32	0.469	2.345	**2**	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	1.04	0.471	1.05	0.473	1.045	**1**	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	22.3	11.8	21.4	11.4	21.85	**4**	25	
Acetonitrile	ND	ND	ND	ND	-	-	25	
Acrolein	ND	ND	ND	ND	-	-	25	
Acetone	25.1	10.6	25.2	10.6	25.15	**0.4**	25	
Trichlorofluoromethane	1.25	0.222	1.25	0.222	1.25	**0**	25	
2-Propanol (Isopropyl Alcohol)	ND	ND	ND	ND	-	-	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	4.65	1.34	4.66	1.34	4.655	**0.2**	25	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-006DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01159

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.74 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.84

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result **µg/m³**	Duplicate Sample Result **ppbV**	Average µg/m³	**% RPD**	RPD Limit	**Data Qualifier**
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Ethyl Acetate	2.83	0.787	2.80	0.777	2.815	**1**	25	
n-Hexane	2.34	0.665	2.31	0.657	2.325	**1**	25	
Chloroform	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran (THF)	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	1.20	0.376	1.21	0.380	1.205	**0.8**	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	3.13	0.583	3.26	0.607	3.195	**4**	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	5.47	1.34	5.56	1.36	5.515	**2**	25	
n-Heptane	1.47	0.359	1.52	0.370	1.495	**3**	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	8.87	2.35	9.16	2.43	9.015	**3**	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Butyl Acetate	3.46	0.728	3.49	0.735	3.475	**0.9**	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Energy Solutions, Inc.**
Client Sample ID: **IA-8hr-052**
Client Project ID: **Leica / 137015**

CAS Project ID: P1301748
CAS Sample ID: P1301748-006DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01159

Date Collected: 4/19/13
Date Received: 4/24/13
Date Analyzed: 5/2/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.74 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.84

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result **µg/m³**	Duplicate Sample Result **ppbV**	Average µg/m³	**% RPD**	RPD Limit	**Data Qualifier**
n-Octane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	3.03	0.699	3.08	0.710	3.055	**2**	25	
m,p-Xylenes	6.45	1.48	6.51	1.50	6.48	**0.9**	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	9.99	2.35	10.2	2.39	10.095	**2**	25	
o-Xylene	2.34	0.540	2.39	0.551	2.365	**2**	25	
n-Nonane	ND	ND	ND	ND	-	-	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
alpha-Pinene	8.24	1.48	8.37	1.50	8.305	**2**	25	
n-Propylbenzene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	1.07	0.217	1.16	0.235	1.115	**8**	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
d-Limonene	1.42	0.255	1.41	0.254	1.415	**0.7**	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

May 08, 2013 Service Request No: R1302808

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

Laboratory Results for: Leica Air 137015

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on April 23, 2013. For your reference, these analyses have been assigned our service request number **R1302808**.

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 ALS Environmental (ALS) 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. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1302808

Lab ID	Client ID
R1302808-001	OA-01

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications.

ALS Environmental

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. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	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	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.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

NELAP Accredited	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Connecticut ID # PH0556	Nebraska Accredited	
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to http://alsglobal.com/environmental/laboratories/rochester-environmental-lab.aspx

ALS ENVIRONMENTAL

Analytical Report

Client: Energy Solutions
Project: Leica Air 137015
Sample Matrix: Air

Service Request: R1302808
Date Collected: 4/19/13 1630
Date Received: 4/23/13

Sample Name: OA-01
Lab Code: R1302808-001

Analytical Method: TO-15

Date Analyzed: 4/24/13 2137
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.26 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	**Chloromethane**	1000	**1.1**	0.66	**0.53**	0.32	
75-01-4	Vinyl Chloride	1000	0.088	0.088	0.035	0.035	U
74-83-9	Bromomethane	1000	0.63	0.63	0.16	0.16	U
75-00-3	Chloroethane	1000	0.85	0.85	0.32	0.32	U
67-64-1	Acetone	1000	7.4	7.4	3.1	3.1	U
75-69-4	**Trichlorofluoromethane (CFC 11)**	1000	**1.4**	0.91	**0.25**	0.16	
75-35-4	1,1-Dichloroethene	1000	0.65	0.65	0.16	0.16	U
75-09-2	Methylene Chloride	1000	0.56	0.56	0.16	0.16	U
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	1000	**0.63**	0.25	**0.083**	0.033	
75-15-0	Carbon Disulfide	1000	0.50	0.50	0.16	0.16	U
156-60-5	trans-1,2-Dichloroethene	1000	0.65	0.65	0.16	0.16	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.66	0.66	0.16	0.16	U
1634-04-4	Methyl tert-Butyl Ether	1000	1.2	1.2	0.32	0.32	U
108-05-4	Vinyl Acetate	1000	7.4	7.4	2.1	2.1	U
78-93-3	2-Butanone (MEK)	1000	0.96	0.96	0.32	0.32	U
156-59-2	cis-1,2-Dichloroethene	1000	0.65	0.65	0.16	0.16	U
67-66-3	Chloroform	1000	0.79	0.79	0.16	0.16	U
107-06-2	1,2-Dichloroethane	1000	0.66	0.66	0.16	0.16	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.88	0.88	0.16	0.16	U
71-43-2	Benzene	1000	0.51	0.51	0.16	0.16	U
56-23-5	**Carbon Tetrachloride**	1000	**0.51**	0.10	**0.081**	0.016	
78-87-5	1,2-Dichloropropane	1000	0.75	0.75	0.16	0.16	U
75-27-4	Bromodichloromethane	1000	0.22	0.22	0.033	0.033	U
79-01-6	Trichloroethene (TCE)	1000	0.088	0.088	0.016	0.016	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.5	1.5	0.32	0.32	U
108-10-1	4-Methyl-2-pentanone	1000	1.3	1.3	0.32	0.32	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.74	0.74	0.16	0.16	U
79-00-5	1,1,2-Trichloroethane	1000	0.88	0.88	0.16	0.16	U
108-88-3	Toluene	1000	0.60	0.60	0.16	0.16	U
591-78-6	2-Hexanone	1000	0.66	0.66	0.16	0.16	U
124-48-1	Dibromochloromethane	1000	0.28	0.28	0.033	0.033	U
106-93-4	1,2-Dibromoethane	1000	0.25	0.25	0.033	0.033	U
127-18-4	Tetrachloroethene (PCE)	1000	0.12	0.12	0.017	0.017	U
108-90-7	Chlorobenzene	1000	0.75	0.75	0.16	0.16	U
100-41-4	Ethylbenzene	1000	1.4	1.4	0.32	0.32	U
179601-23-1	m,p-Xylenes	1000	2.8	2.8	0.65	0.65	U
75-25-2	Bromoform	1000	1.7	1.7	0.16	0.16	U

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302808
Project:	Leica Air 137015	**Date Collected:**	4/19/13 1630
Sample Matrix:	Air	**Date Received:**	4/23/13
Sample Name:	OA-01		
Lab Code:	R1302808-001		

Analytical Method: TO-15

Date Analyzed: 4/24/13 2137
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.26 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
100-42-5	Styrene	1000	1.4	1.4	0.32	0.32	U
95-47-6	o-Xylene	1000	1.4	1.4	0.32	0.32	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.22	0.22	0.032	0.032	U
541-73-1	1,3-Dichlorobenzene	1000	1.9	1.9	0.32	0.32	U
106-46-7	1,4-Dichlorobenzene	1000	1.9	1.9	0.32	0.32	U
95-50-1	1,2-Dichlorobenzene	1000	1.9	1.9	0.32	0.32	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	109	70-130	4/24/13 2137	

ALS ENVIRONMENTAL

Analytical Report

Client: Energy Solutions
Project: Leica Air 137015
Sample Matrix: Air

Service Request: R1302808
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1304254-01

Analytical Method: TO-15

Date Analyzed: 4/24/13 1037

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	0.17	0.17	0.022	0.022	U
75-15-0	Carbon Disulfide	1000	0.34	0.34	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
108-05-4	Vinyl Acetate	1000	5.0	5.0	1.4	1.4	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302808
Project:	Leica Air 137015	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1304254-01		

Analytical Method: TO-15 **Date Analyzed:** 4/24/13 1037

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	106	70-130	4/24/13 1037	

ALS ENVIRONMENTAL

QA/QC Report

Client: Energy Solutions
Project: Leica Air 137015
Sample Matrix: Air

Service Request: R1302808
Date Analyzed: 4/24/13

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: 338036

Analyte Name	Lab Control Sample RQ1304254-02 Result	Spike Amount	% Rec	% Rec Limits
Chloromethane	4.67	5.26	89	70 - 130
Vinyl Chloride	6.59	6.58	100	70 - 130
Bromomethane	10.0	9.89	102	70 - 130
Chloroethane	6.44	6.66	97	70 - 130
Acetone	6.26	6.47	97	70 - 130
Trichlorofluoromethane (CFC 11)	15.8	14.3	110	70 - 130
1,1-Dichloroethene	10.3	10.4	99	70 - 130
Methylene Chloride	8.31	9.03	92	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	19.1	19.9	96	70 - 130
Carbon Disulfide	8.26	7.94	104	70 - 130
trans-1,2-Dichloroethene	9.81	10.4	94	70 - 130
1,1-Dichloroethane (1,1-DCA)	9.80	10.5	93	70 - 130
Methyl tert-Butyl Ether	9.26	9.64	96	70 - 130
Vinyl Acetate	8.26	9.06	91	70 - 130
2-Butanone (MEK)	7.30	7.89	93	70 - 130
cis-1,2-Dichloroethene	9.51	10.5	91	70 - 130
Chloroform	12.8	13.2	97	70 - 130
1,2-Dichloroethane	12.4	10.6	117	70 - 130
1,1,1-Trichloroethane (TCA)	15.6	14.3	109	70 - 130
Benzene	7.86	8.38	94	70 - 130
Carbon Tetrachloride	17.2	15.9	108	70 - 130
1,2-Dichloropropane	10.5	12.1	87	70 - 130
Bromodichloromethane	18.4	17.4	105	70 - 130
Trichloroethene (TCE)	13.6	14.0	97	70 - 130
cis-1,3-Dichloropropene	12.4	12.3	101	70 - 130
4-Methyl-2-pentanone	9.79	10.5	93	70 - 130
trans-1,3-Dichloropropene	11.1	11.0	100	70 - 130
1,1,2-Trichloroethane	13.5	14.6	93	70 - 130
Toluene	9.29	10.1	92	70 - 130
2-Hexanone	9.99	11.4	88	70 - 130
Dibromochloromethane	24.6	23.4	105	70 - 130
1,2-Dibromoethane	19.0	20.0	95	70 - 130
Tetrachloroethene (PCE)	18.9	18.0	105	70 - 130
Chlorobenzene	11.7	12.3	95	70 - 130
Ethylbenzene	11.0	11.5	95	70 - 130
m,p-Xylenes	21.9	22.4	98	70 - 130
Bromoform	28.8	26.6	108	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS ENVIRONMENTAL

QA/QC Report

Client: Energy Solutions
Project: Leica Air 137015
Sample Matrix: Air

Service Request: R1302808
Date Analyzed: 4/24/13

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: 338036

Analyte Name	Lab Control Sample RQ1304254-02 Result	Spike Amount	% Rec	% Rec Limits
Styrene	10.8	11.2	97	70 - 130
o-Xylene	11.3	11.9	94	70 - 130
1,1,2,2-Tetrachloroethane	15.7	18.9	83	70 - 130
1,3-Dichlorobenzene	14.4	15.0	96	70 - 130
1,4-Dichlorobenzene	13.9	15.0	93	70 - 130
1,2-Dichlorobenzene	13.9	15.0	93	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

R1302808 5
Energy Solutions, Inc.
Leica Air 137015

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day-Standard)

CAS Project No.

CAS Contact: K. Aguilera

Company Name & Address (Reporting Information): ENERGY SOLUTIONS, 100 Mill Plain Rd, DANBURY CT 06811

Project Name: LEICA

Project Number: 137015

Project Manager: Bob McPeak

P.O. # / Billing Information:

Phone: 801 303 1092

Fax:

Email Address for Result Reporting: RMcPeak@EnergySolutions.com

Sampler (Print & Sign): DAN SLYWKA [signature]

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15	Analysis Method: He	Comments e.g. Actual Preservative or specific instructions
SB-3		4/19/13	0830/1630	AC01582	FCA00490	28.0	6.0	6L	X	X	
IA-3		4/19/13	0830/1630	AC01348	FCA00007	29.5	9.0	6L	X		
SS-8hr-051		4/19/13	0800/1600	AC01382	FCA00532	29.0	8.5	6L	X	X	
SS-8hr-052		4/19/13	0815/1615	AC00876	FCA00193	27.5	5.0	6L	X	X	
IA-8hr-051		4/19/13	0800/1600	AS00384	FCA00408	27.5	5.0	6L	X		
IA-8hr-052		4/19/13	0815/1615	AC01159	FCA00177	29.0	10.0	6L	X		
OA-01	-001	4/19/13	0830/1630	SLC00146	FC00853	30.0	7.0	6L	X		
IA-8hr-056		4/20/13	0720/1530	AC01305	FCA00233	27.5	6.0	6L	X		
SS-8hr-053		4/20/13	0740/1545	AC01901	FCA00174	29.0	6.0	6L	X	X	
IA-8hr-053		4/20/13	0740/1545	AC00915	FCA00075	30.0	6.0	6L	X		
SS-8hr-054		4/20/13	0805/1610	AC01363	FCA00203	29.0	5.0	6L	X	X	
IA-8hr-054		4/20/13	0805/1610	AC00509	FCA00480	30.0+	11.0	6L	X		
SS-8hr-055		4/20/13	0730/1550	AC00676	FCA00246	29.0	6.0	6L	X	X	
IA-8hr-055		4/20/13	0730/1550	AC01414	FCA00678	29.5	6.0	6L	X		

Report Tier Levels - please select
Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge ____

EDD required (Yes) / No
Type: NY DEC

Project Requirements (MRLs, QAPP): R1302808

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	4/22/13	11:15	[signature]	4-22-13	1115
[signature]	4/23/13	1530			

Cooler / Blank Temperature °C

00010

Cooler Receipt and Preservation Check Form

Project/Client Energy Solutions Folder Number R1302808

Cooler received on 4/23/13 by: (R) COURIER: (ALS) 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 VOA vials, Alkalinity, or Sulfide have significant* air bubbles?			YES	NO	(N/A)
5.	Were **Ice** or **Ice packs** present?			YES	(NO)	
6.	Where did the bottles originate?			(ALS/ROC)	CLIENT	
7.	Soil VOA samples received as:	Bulk Jar	Encore	TerraCore	Lab5035set	(N/A)
8.	Temperature of cooler(s) upon receipt:	AR				
	Is the temperature within 0° - 6° C?:	Y N	Y N	Y N	Y N	Y N

If No, Explain Below Date/Time Temperatures Taken: AR

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:

All Samples held in storage location SMO by (R) on 4/23/13 at 1530
5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: KB 4/23/13

Cooler Breakdown: Date: 4/23/13 Time: 1609 by: (R)

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

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								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	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:

PC Secondary Review: KB 4/23/13

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

May 06, 2013 Service Request No: R1302734

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

Laboratory Results for: Leica 137015

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on April 19, 2013. For your reference, these analyses have been assigned our service request number **R1302734**.

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 ALS Environmental (ALS) 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. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Client:	Energy Solutions	**Service Request No.:**	R1302734
Project:	Leica Wells April /2013	**Date Received:**	4/19/13
Sample Matrix:	Water		

All analyses were performed consistent with the quality assurance program of ALS Environmental (ALS). 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

Four (4) samples were collected by the client on 4/16/13 and received for analysis at ALS on 4/19/13 via ALS Courier.

Volatile Organics

Four (4) water samples were analyzed for Volatile Organic compounds by GC/MS method 8260C.

The Initials Calibration criteria were met for all samples. The Continuing Calibration criteria were met except for the %D which was outside the ±20% limits for the compound Bromomethane (34.9%), Carbon Tetrachloride (23.6%), Dibromochloromethane (20.3%) on the 4/26/13 run and Bromoform (27.2%), and Bromomethane (-34.4%) on the 4/29/13 run. Any hits for these compounds on the associated CCV's should be considered as estimated.

Batch QC is included in the report. All Laboratory Control Sample (LCS) and LCS Duplicate (LCSD) recoveries for target compounds were within QC limits except for Bromoform on the 4/26/13 and 4/29/13 runs which were outside limits high. The exceeded recoveries are flagged as "*". No data was affected. All Relative Percent Difference (RPD) calculations were acceptable.

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

All Surrogate recoveries are within acceptance limits.

The Laboratory Method Blanks were free from contamination.

No other problems were encountered during the analysis of these samples.

Approved by Karen Burden **Date** 5/6/13

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1302734

Lab ID	Client ID
R1302734-001	INT-10
R1302734-002	INT-11
R1302734-003	INT-12
R1302734-004	INT-13

ALS Environmental

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. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	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	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.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

NELAP Accredited	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Connecticut ID # PH0556	Nebraska Accredited	
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to http://alsglobal.com/environmental/laboratories/rochester-environmental-lab.aspx

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1430
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/26/13 19:34
Sample Name:	INT-10	**Units:**	µg/L
Lab Code:	R1302734-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8688.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	250	U	250	
71-43-2	Benzene	130	U	130	
75-27-4	Bromodichloromethane	130	U	130	
75-25-2	Bromoform	130	U	130	
74-83-9	Bromomethane	130	U	130	
78-93-3	2-Butanone (MEK)	250	U	250	
75-15-0	Carbon Disulfide	250	U	250	
56-23-5	Carbon Tetrachloride	130	U	130	
108-90-7	Chlorobenzene	130	U	130	
75-00-3	Chloroethane	130	U	130	
67-66-3	Chloroform	130	U	130	
74-87-3	Chloromethane	130	U	130	
124-48-1	Dibromochloromethane	130	U	130	
75-34-3	1,1-Dichloroethane	130	U	130	
107-06-2	1,2-Dichloroethane	130	U	130	
75-35-4	1,1-Dichloroethene	130	U	130	
156-59-2	cis-1,2-Dichloroethene	**340**		130	
156-60-5	trans-1,2-Dichloroethene	130	U	130	
78-87-5	1,2-Dichloropropane	130	U	130	
10061-01-5	cis-1,3-Dichloropropene	130	U	130	
10061-02-6	trans-1,3-Dichloropropene	130	U	130	
100-41-4	Ethylbenzene	130	U	130	
591-78-6	2-Hexanone	250	U	250	
75-09-2	Methylene Chloride	130	U	130	
108-10-1	4-Methyl-2-pentanone (MIBK)	250	U	250	
100-42-5	Styrene	130	U	130	
79-34-5	1,1,2,2-Tetrachloroethane	130	U	130	
127-18-4	Tetrachloroethene	130	U	130	
108-88-3	Toluene	130	U	130	
71-55-6	1,1,1-Trichloroethane	130	U	130	
79-00-5	1,1,2-Trichloroethane	130	U	130	
79-01-6	Trichloroethene	**5100**	E	130	
75-01-4	Vinyl Chloride	130	U	130	
95-47-6	o-Xylene	130	U	130	
179601-23-1	m,p-Xylenes	130	U	130	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1430
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/26/13 19:34
Sample Name:	INT-10	**Units:**	µg/L
Lab Code:	R1302734-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8688.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85-122	4/26/13 19:34	
Toluene-d8	99	87-121	4/26/13 19:34	
Dibromofluoromethane	112	89-119	4/26/13 19:34	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1430
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/29/13 17:33
Sample Name:	INT-10	**Units:**	µg/L
Lab Code:	R1302734-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8733.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	500	U	500	
71-43-2	Benzene	250	U	250	
75-27-4	Bromodichloromethane	250	U	250	
75-25-2	Bromoform	250	U	250	
74-83-9	Bromomethane	250	U	250	
78-93-3	2-Butanone (MEK)	500	U	500	
75-15-0	Carbon Disulfide	500	U	500	
56-23-5	Carbon Tetrachloride	250	U	250	
108-90-7	Chlorobenzene	250	U	250	
75-00-3	Chloroethane	250	U	250	
67-66-3	Chloroform	250	U	250	
74-87-3	Chloromethane	250	U	250	
124-48-1	Dibromochloromethane	250	U	250	
75-34-3	1,1-Dichloroethane	250	U	250	
107-06-2	1,2-Dichloroethane	250	U	250	
75-35-4	1,1-Dichloroethene	250	U	250	
156-59-2	cis-1,2-Dichloroethene	**490**	D	250	
156-60-5	trans-1,2-Dichloroethene	250	U	250	
78-87-5	1,2-Dichloropropane	250	U	250	
10061-01-5	cis-1,3-Dichloropropene	250	U	250	
10061-02-6	trans-1,3-Dichloropropene	250	U	250	
100-41-4	Ethylbenzene	250	U	250	
591-78-6	2-Hexanone	500	U	500	
75-09-2	Methylene Chloride	250	U	250	
108-10-1	4-Methyl-2-pentanone (MIBK)	500	U	500	
100-42-5	Styrene	250	U	250	
79-34-5	1,1,2,2-Tetrachloroethane	250	U	250	
127-18-4	Tetrachloroethene	250	U	250	
108-88-3	Toluene	250	U	250	
71-55-6	1,1,1-Trichloroethane	250	U	250	
79-00-5	1,1,2-Trichloroethane	250	U	250	
79-01-6	Trichloroethene	**7500**	D	250	
75-01-4	Vinyl Chloride	250	U	250	
95-47-6	o-Xylene	250	U	250	
179601-23-1	m,p-Xylenes	250	U	250	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1430
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/29/13 17:33
Sample Name:	INT-10	**Units:**	µg/L
Lab Code:	R1302734-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8733.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85-122	4/29/13 17:33	
Toluene-d8	98	87-121	4/29/13 17:33	
Dibromofluoromethane	106	89-119	4/29/13 17:33	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1345
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/26/13 20:03
Sample Name:	INT-11	**Units:**	µg/L
Lab Code:	R1302734-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8689.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	50	U	50	
71-43-2	Benzene	25	U	25	
75-27-4	Bromodichloromethane	25	U	25	
75-25-2	Bromoform	25	U	25	
74-83-9	Bromomethane	25	U	25	
78-93-3	2-Butanone (MEK)	50	U	50	
75-15-0	Carbon Disulfide	50	U	50	
56-23-5	Carbon Tetrachloride	25	U	25	
108-90-7	Chlorobenzene	25	U	25	
75-00-3	Chloroethane	25	U	25	
67-66-3	Chloroform	25	U	25	
74-87-3	Chloromethane	25	U	25	
124-48-1	Dibromochloromethane	25	U	25	
75-34-3	1,1-Dichloroethane	25	U	25	
107-06-2	1,2-Dichloroethane	25	U	25	
75-35-4	1,1-Dichloroethene	25	U	25	
156-59-2	cis-1,2-Dichloroethene	**1300**	E	25	
156-60-5	trans-1,2-Dichloroethene	25	U	25	
78-87-5	1,2-Dichloropropane	25	U	25	
10061-01-5	cis-1,3-Dichloropropene	25	U	25	
10061-02-6	trans-1,3-Dichloropropene	25	U	25	
100-41-4	Ethylbenzene	25	U	25	
591-78-6	2-Hexanone	50	U	50	
75-09-2	Methylene Chloride	25	U	25	
108-10-1	4-Methyl-2-pentanone (MIBK)	50	U	50	
100-42-5	Styrene	25	U	25	
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	
127-18-4	Tetrachloroethene	25	U	25	
108-88-3	Toluene	25	U	25	
71-55-6	1,1,1-Trichloroethane	25	U	25	
79-00-5	1,1,2-Trichloroethane	25	U	25	
79-01-6	Trichloroethene	**74**		25	
75-01-4	Vinyl Chloride	**44**		25	
95-47-6	o-Xylene	25	U	25	
179601-23-1	m,p-Xylenes	25	U	25	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1345
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/26/13 20:03
Sample Name:	INT-11	**Units:**	µg/L
Lab Code:	R1302734-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8689.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	85-122	4/26/13 20:03	
Toluene-d8	99	87-121	4/26/13 20:03	
Dibromofluoromethane	112	89-119	4/26/13 20:03	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1345
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/29/13 18:03
Sample Name:	INT-11	**Units:**	µg/L
Lab Code:	R1302734-002	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8734.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	100	U	100	
71-43-2	Benzene	50	U	50	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
78-93-3	2-Butanone (MEK)	100	U	100	
75-15-0	Carbon Disulfide	100	U	100	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-34-3	1,1-Dichloroethane	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
75-35-4	1,1-Dichloroethene	50	U	50	
156-59-2	cis-1,2-Dichloroethene	**1100**	D	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	
100-41-4	Ethylbenzene	50	U	50	
591-78-6	2-Hexanone	100	U	100	
75-09-2	Methylene Chloride	50	U	50	
108-10-1	4-Methyl-2-pentanone (MIBK)	100	U	100	
100-42-5	Styrene	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
127-18-4	Tetrachloroethene	50	U	50	
108-88-3	Toluene	50	U	50	
71-55-6	1,1,1-Trichloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
79-01-6	Trichloroethene	**66**	D	50	
75-01-4	Vinyl Chloride	50	U	50	
95-47-6	o-Xylene	50	U	50	
179601-23-1	m,p-Xylenes	50	U	50	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1345
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/29/13 18:03
Sample Name:	INT-11	**Units:**	µg/L
Lab Code:	R1302734-002	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8734.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	85-122	4/29/13 18:03	
Toluene-d8	97	87-121	4/29/13 18:03	
Dibromofluoromethane	105	89-119	4/29/13 18:03	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1600
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/26/13 20:33
Sample Name:	INT-12	**Units:**	µg/L
Lab Code:	R1302734-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8690.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	200	U	200	
71-43-2	Benzene	100	U	100	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
78-93-3	2-Butanone (MEK)	200	U	200	
75-15-0	Carbon Disulfide	200	U	200	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-34-3	1,1-Dichloroethane	**160**		100	
107-06-2	1,2-Dichloroethane	100	U	100	
75-35-4	1,1-Dichloroethene	100	U	100	
156-59-2	cis-1,2-Dichloroethene	**500**		100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	
100-41-4	Ethylbenzene	100	U	100	
591-78-6	2-Hexanone	200	U	200	
75-09-2	Methylene Chloride	100	U	100	
108-10-1	4-Methyl-2-pentanone (MIBK)	200	U	200	
100-42-5	Styrene	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
127-18-4	Tetrachloroethene	100	U	100	
108-88-3	Toluene	100	U	100	
71-55-6	1,1,1-Trichloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
79-01-6	Trichloroethene	**2400**		100	
75-01-4	Vinyl Chloride	100	U	100	
95-47-6	o-Xylene	100	U	100	
179601-23-1	m,p-Xylenes	100	U	100	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1600
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/26/13 20:33
Sample Name:	INT-12	**Units:**	µg/L
Lab Code:	R1302734-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8690.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85-122	4/26/13 20:33	
Toluene-d8	100	87-121	4/26/13 20:33	
Dibromofluoromethane	114	89-119	4/26/13 20:33	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1630
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/29/13 18:32
Sample Name:	INT-13	**Units:**	µg/L
Lab Code:	R1302734-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8735.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**65**		5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	**8.6**		5.0	
156-59-2	cis-1,2-Dichloroethene	**38**		5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
591-78-6	2-Hexanone	10	U	10	
75-09-2	Methylene Chloride	5.0	U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
100-42-5	Styrene	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**23**		5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
79-01-6	Trichloroethene	**160**		5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	4/16/13 1630
Sample Matrix:	Water	**Date Received:**	4/19/13
		Date Analyzed:	4/29/13 18:32
Sample Name:	INT-13	**Units:**	µg/L
Lab Code:	R1302734-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8735.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	85-122	4/29/13 18:32	
Toluene-d8	98	87-121	4/29/13 18:32	
Dibromofluoromethane	109	89-119	4/29/13 18:32	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/26/13 14:09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1304362-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8677.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
591-78-6	2-Hexanone	10	U	10	
75-09-2	Methylene Chloride	5.0	U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
100-42-5	Styrene	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/26/13 14:09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1304362-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338201
Data File Name:	I:\ACQUDATA\msvoa10\data\042613\E8677.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85-122	4/26/13 14:09	
Toluene-d8	96	87-121	4/26/13 14:09	
Dibromofluoromethane	104	89-119	4/26/13 14:09	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/29/13 16:04
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1304450-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8730.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
591-78-6	2-Hexanone	10	U	10	
75-09-2	Methylene Chloride	5.0	U	5.0	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
100-42-5	Styrene	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	

ALS ENVIRONMENTAL

Analytical Report

Client:	Energy Solutions	**Service Request:**	R1302734
Project:	Leica 137015	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/29/13 16:04
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1304450-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	338428
Data File Name:	I:\ACQUDATA\msvoa10\data\042913\E8730.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	85-122	4/29/13 16:04	
Toluene-d8	97	87-121	4/29/13 16:04	
Dibromofluoromethane	103	89-119	4/29/13 16:04	

ALS ENVIRONMENTAL

QA/QC Report

Client: Energy Solutions
Project: Leica 137015
Sample Matrix: Water

Service Request: R1302734
Date Analyzed: 4/26/13

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 338201

	Lab Control Sample RQ1304362-02				Duplicate Lab Control Sample RQ1304362-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Acetone	19.8	20.0	99		19.0	20.0	95		64 - 133	4	30
Benzene	17.7	20.0	88		17.0	20.0	85		78 - 118	4	30
Bromodichloromethane	20.5	20.0	102		20.5	20.0	102		79 - 123	<1	30
Bromoform	27.7	20.0	139	*	28.7	20.0	143	*	69 - 126	3	30
Bromomethane	17.8	20.0	89		17.0	20.0	85		49 - 124	4	30
2-Butanone (MEK)	16.0	20.0	80		17.7	20.0	88		60 - 133	10	30
Carbon Disulfide	20.9	20.0	104		19.1	20.0	95		67 - 138	9	30
Carbon Tetrachloride	22.7	20.0	114		22.0	20.0	110		64 - 129	3	30
Chlorobenzene	18.7	20.0	93		18.2	20.0	91		80 - 121	3	30
Chloroethane	19.4	20.0	97		18.5	20.0	93		72 - 130	5	30
Chloroform	18.5	20.0	92		18.0	20.0	90		75 - 123	3	30
Chloromethane	19.5	20.0	97		18.7	20.0	94		55 - 139	4	30
Dibromochloromethane	23.6	20.0	118		24.5	20.0	122		78 - 127	4	30
1,1-Dichloroethane	18.6	20.0	93		17.9	20.0	90		76 - 124	4	30
1,2-Dichloroethane	17.2	20.0	86		17.2	20.0	86		72 - 130	<1	30
1,1-Dichloroethene	19.7	20.0	98		16.3	20.0	82		67 - 119	19	30
cis-1,2-Dichloroethene	18.0	20.0	90		17.4	20.0	87		77 - 123	4	30
trans-1,2-Dichloroethene	18.1	20.0	90		17.3	20.0	87		72 - 120	4	30
1,2-Dichloropropane	19.8	20.0	99		19.5	20.0	97		83 - 119	1	30
cis-1,3-Dichloropropene	21.6	20.0	108		21.7	20.0	108		77 - 125	<1	30
trans-1,3-Dichloropropene	23.2	20.0	116		23.3	20.0	117		69 - 127	<1	30
Ethylbenzene	18.2	20.0	91		17.6	20.0	88		75 - 123	3	30
2-Hexanone	14.1	20.0	71		16.6	20.0	83		61 - 131	16	30
Methylene Chloride	18.7	20.0	94		18.8	20.0	94		73 - 122	<1	30
4-Methyl-2-pentanone (MIBK)	15.8	20.0	79		17.8	20.0	89		61 - 132	12	30
Styrene	18.3	20.0	92		18.0	20.0	90		80 - 121	2	30
1,1,2,2-Tetrachloroethane	18.5	20.0	92		19.6	20.0	98		72 - 124	6	30
Tetrachloroethene	18.9	20.0	95		18.0	20.0	90		71 - 127	5	30
Toluene	18.1	20.0	90		17.4	20.0	87		77 - 120	4	30
1,1,1-Trichloroethane	18.6	20.0	93		17.7	20.0	89		67 - 121	5	30
1,1,2-Trichloroethane	18.9	20.0	95		19.7	20.0	98		81 - 117	4	30
Trichloroethene	18.2	20.0	91		17.5	20.0	88		75 - 122	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS ENVIRONMENTAL

QA/QC Report

Client: Energy Solutions
Project: Leica 137015
Sample Matrix: Water

Service Request: R1302734
Date Analyzed: 4/26/13

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 338201

Analyte Name	Lab Control Sample RQ1304362-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1304362-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Vinyl Chloride	19.0	20.0	95	18.2	20.0	91	68 - 139	4	30
o-Xylene	18.3	20.0	91	17.6	20.0	88	77 - 131	4	30
m,p-Xylenes	38.6	40.0	96	37.1	40.0	93	77 - 124	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS ENVIRONMENTAL

QA/QC Report

Client: Energy Solutions
Project: Leica 137015
Sample Matrix: Water

Service Request: R1302734
Date Analyzed: 4/29/13

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 338428

Analyte Name	Lab Control Sample RQ1304450-02 Result	Spike Amount	% Rec		% Rec Limits
Acetone	20.6	20.0	103		64 - 133
Benzene	17.6	20.0	88		78 - 118
Bromodichloromethane	20.6	20.0	103		79 - 123
Bromoform	27.1	20.0	136	*	69 - 126
Bromomethane	13.7	20.0	68		49 - 124
2-Butanone (MEK)	16.0	20.0	80		60 - 133
Carbon Disulfide	25.2	20.0	126		67 - 138
Carbon Tetrachloride	24.5	20.0	123		64 - 129
Chlorobenzene	17.6	20.0	88		80 - 121
Chloroethane	17.2	20.0	86		72 - 130
Chloroform	17.6	20.0	88		75 - 123
Chloromethane	17.3	20.0	87		55 - 139
Dibromochloromethane	23.4	20.0	117		78 - 127
1,1-Dichloroethane	18.1	20.0	90		76 - 124
1,2-Dichloroethane	17.6	20.0	88		72 - 130
1,1-Dichloroethene	19.0	20.0	95		67 - 119
cis-1,2-Dichloroethene	17.3	20.0	86		77 - 123
trans-1,2-Dichloroethene	17.2	20.0	86		72 - 120
1,2-Dichloropropane	19.2	20.0	96		83 - 119
cis-1,3-Dichloropropene	22.5	20.0	113		77 - 125
trans-1,3-Dichloropropene	24.2	20.0	121		69 - 127
Ethylbenzene	17.2	20.0	86		75 - 123
2-Hexanone	16.7	20.0	84		61 - 131
Methylene Chloride	17.5	20.0	87		73 - 122
4-Methyl-2-pentanone (MIBK)	19.0	20.0	95		61 - 132
Styrene	17.8	20.0	89		80 - 121
1,1,2,2-Tetrachloroethane	17.0	20.0	85		72 - 124
Tetrachloroethene	18.5	20.0	92		71 - 127
Toluene	17.9	20.0	89		77 - 120
1,1,1-Trichloroethane	18.7	20.0	94		67 - 121
1,1,2-Trichloroethane	18.2	20.0	91		81 - 117
Trichloroethene	19.0	20.0	95		75 - 122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS ENVIRONMENTAL

QA/QC Report

Client: Energy Solutions
Project: Leica 137015
Sample Matrix: Water

Service Request: R1302734
Date Analyzed: 4/29/13

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 338428

Analyte Name	Lab Control Sample RQ1304450-02 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	17.7	20.0	89	68 - 139
o-Xylene	17.7	20.0	88	77 - 131
m,p-Xylenes	36.5	40.0	91	77 - 124

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 07443

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE _____ OF _____

Project Name: Leica	Project Number: 137015
Project Manager: Bob McPeak	Report CC: D. SLYWKA
Company/Address: Energy Solutions / 100 mill Plain Rd / DANBURY CT 06811	
Phone #: 801 303 1092	Email: RMcPeak@EnergySolutions.com
Sampler's Signature:	Sampler's Printed Name: DAN SLYWKA

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs 8260 ○ 624 ○ CLP (Solids via 5035)	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS: TOTAL (List in comments below)	METALS: DISSOLVED (List in comments below)	Chamber Analysis TO-15	Holding in chamber For 1 week @ Ambient temp prior to Analysis TO-15	
INT-10	-001	4/16/13	1430	W	3	X									
INT-11	-002	4/16/13	1345	W	3	X									
INT-12	-003	4/18/13	1600	W	3	X									
INT-13	-004	4/18/13	1630	W	3	X									
CC-01	-001 S	4/19/13	1000	S	4	X							X	X	
CC-02	-002 D	4/19/13	1020	S	4	X							X	X	
CC-03	-003 A	4/19/13	0925	S	4	X							X	X	
CC-04	-004 A	4/19/13	0900	S	4	X							X	X	
CC-05	-005 A	4/19/13	1050	S	4	X							X	X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION: Concrete SAMPLES *SEE KAREN BOWKER*

SPECIAL INSTRUCTIONS/COMMENTS
Metals
*Soils: R1302733
Waters: R1302734
TO-15 Chamber Analysis to Simi Valley

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: NY

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
REQUESTED REPORT DATE: STND

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
Edata _____ Yes X No

INVOICE INFORMATION
PO #
BILL TO:

R1302734 5
Energy Solutions, Inc.
Leica 137015

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
Signature:	Signature:	Signature:	Signature:	Signature
Printed Name: DAN SLYWKA	Printed Name: Pat Bennett	Printed Name: Pat Bennett	Printed Name: Gaby LeFan	Printed Name
Firm: Energy Solutions	Firm: ALS	Firm: ALS	Firm: ALS	Firm
Date/Time: 4/19/13 1200	Date/Time: 4-19-13 1200	Date/Time: 4-19-13 1335	Date/Time: 4/19/13 1335	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

Cooler Receipt and Preservation Check Form

Project/Client Energy Solutions Folder Number R302734

Cooler received on 4/19/13 by: (SD) COURIER: (ALS) 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 VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	(NO)	N/A
5.	Were **Ice** or **Ice packs** present?	(YES)	NO	
6.	Where did the bottles originate?	(ALS/ROC)	CLIENT	
7.	Soil VOA samples received as:	Bulk Jar	Encore	(TerraCore) Lab5035set N/A
8.	Temperature of cooler(s) upon receipt:	2.0°		
	Is the temperature within 0° - 6° C?:	(Y)N	Y N	Y N Y N Y N

If No, Explain Below Date/Time Temperatures Taken: 4/19/13 1340

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:

All Samples held in storage location R-002 by (SD) on 4/19/13 at 1345

5035 samples placed in storage location F-05 by (SD) on 4/19/13 at 1345

PC Secondary Review: KB 4/19/13

Cooler Breakdown: Date: 4/19/13 Time: 1644 by: (IR)

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)

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								
≤4	$NaHSO_4$								
Residual Chlorine -)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	4111100	8/13				

*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: 2-143-001

Other Comments:

PC Secondary Review: KB 5/6/13

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter