

T E C H N I C A L M E M O R A N D U M

TO: Bob Williams, DEQ
FROM: Jason Flowers, Ph.D., P.E., Brent Miller, P.E.
CC: John Cushing, Cascade Corp.
Charles Andrews, SSPA
Ken Chaput, The Boeing Company
Chris Kimmel, Eric Weber, Landau Associates
DATE: 30 October 2014
SUBJECT: TSA Soil Vapor Extraction Pilot Test Results

Geosyntec Consultants (Geosyntec) has prepared this technical memorandum on behalf of Cascade Corporation (Cascade) and The Boeing Company (Boeing) to document the results of a Soil Vapor Extraction Pilot Test (SVE Pilot Test) investigation conducted as part of the joint Cascade and Boeing remedy of the Troutdale Sandstone Aquifer (TSA). The TSA remedy is being implemented under the Department of Environmental Quality's (DEQ's) Consent Order No. WMCSR-NWR-96-08 (DEQ, 1997). DEQ approved the Soil Vapor Extraction Work Plan (Geosyntec, 2014) on 30 April 2014.

The purpose of the SVE pilot testing was to evaluate whether significant VOC mass remains in the unsaturated portion of the Upper TSA in and around the former off-site Troutdale Gravel Aquifer (TGA) TCE plume north of Interstate I-84 (the Site). The SVE pilot study consisted of: 1) short-term step tests to determine the influence of vacuum on the system flow rates and to determine radius of influence estimates, and 2) a long-term extraction test to determine the efficiency of the SVE system to remove VOCs from the TSA and to determine SVE parameters for potential future remedial designs (if necessary).

SOIL VAPOR EXTRACTION PILOT STUDY PROCEDURES

Two pilot tests, a step-test and long-term extraction test, were conducted on five existing wells, VW-17d-42.5, VW-17d-75, VW-17d-95.5, MW-17ds, and D-17ds, at the Site (Figure 1). Initially, individual 4-hour step tests were conducted on each of the five wells to collect initial flow, vacuum, concentration, and where possible, radius of influence (ROI), and short-circuiting information. Applied vacuums were adjusted to develop a vacuum versus flow curve, and based on the results an optimal flow rate was selected for use during the remaining short-term test and the long-term test. Where available, nearby wells were capped/valved and vacuum readings were recorded to obtain ROI information. Flow, vacuum, temperature, and ROI data were recorded at approximately 0.5-hour intervals during the test.

Vapor samples were collected shortly after the start of the step test and after four hours. The vapor samples were collected in one (1) liter summa canisters over a five-minute period and the samples were sent to Environmental Science Corporation for VOC analysis using the EPA Method TO-15.

Following the initial step tests, a long-term extraction test was conducted on four wells (VW-17d-42.5, VW-17d-75, VW-17d-95.5, and MW-17ds). Due to its location further away from the Central Treatment System (CTS) compound, a longer term test was not conducted at D-17ds. During the long-term test, the wells were manifolded to the extraction system and operated at the selected flow and vacuum conditions determined during the step tests. The long-term test was conducted for approximately seven days to allow for a minimum of 15 to 20 pore volume exchanges of air, which were calculated based on flow rates and assumed radius of influence. During the test, flow, vacuum, and field vapor concentrations (as measured with a PID) for each well was recorded daily. Vapor samples were collected in one (1) liter summa canisters over a 5 minute period prior to the SVE pilot test (baseline event), and following 24, 72, 168 hours of operation, and then a final rebound lab sample was collected one week after shutdown at 336 hours. The vapor samples were analyzed by ESC Lab Sciences (Mt. Juliet, TN) using the EPA Method TO-15.

SOIL VAPOR EXTRACTION PILOT STUDY RESULTS

Step Test Results

Step tests were performed at five wells (D-17ds, MW-17ds, VM-17d-42.5, VM-17d-75, VM-17d-95.5). With the exception of D-17ds, a positive, linear relation between vacuum applied and measure airflow was observed in all wells. Contrastingly, D-17ds was unique in that the data showed that the relationship between vacuum applied and airflow was bell shaped with 10 inches of mercury (inches of Hg) providing the maximum airflow of approximately 20 standard cubic feet per minute (scfm). MW-17ds required the largest vacuum (>13 inches of Hg) applied to achieve measureable air flow, as compared to all other wells which had air flow at 5 inches of Hg vacuum or lower. A graph summarizing the flow versus vacuum relationship for each well is provided in Figure 2, and the field data are summarized in Attachment A.

Based on the results of the step test, target flow rates detailed in the work plan, and the capacity of the SVE pilot test equipment, flow rates for the long-term test were selected to be 10 scfm for MW-17ds, 20 scfm for VW-17d-42.5, and 60 scfm for VW-17d-75 and VW-17d-95.5. These flow rates correspond to 2 scfm per foot of anticipated available wells screen for MW-17ds, 4 scfm per foot of wells screen for VW-17d-42.5, and 3 scfm per foot of screen for VW-17d-75 and VW-17d-92.5. The work plan design targeted the exchange of approximately 17.1 pore

volumes; however, results of the pilot study indicate over 60 pore volume exchanges occurred for the four wells during the long-term test.

Radius of influence analysis revealed that wells VW-17d-75 and VW-17d-95 appeared to have strong influence on each other, likely due to the vertical proximity of the wells screens. The radius of influence at well VW-17d-42 relative to the other wells could not be determined, because residual vacuums created from the previous days experiments remained at the three other wells. As a result, each well progressively lost vacuum throughout the experiment, indicating no influence. During extraction at well MW-17ds, wells VW-17d-42.5, VW-17d-75, and VW-17d-95.5 appeared to be pressurized, likely due to the rise in water table levels observed at MW-17ds and potential resultant air compression within the Upper TSA.

Vapor analysis revealed that chlorinated volatile organic compounds (cVOCs) tetrachloroethene (PCE), trichloroethene (TCE), and dichloroethene (DCE) were not detected in D-17ds, but benzene, toluene, ethylbenzene, and total xylenes (BTEX) were detected in both samples. Specifically, total xylenes (m-, p-, and o-xylene) measured 11,100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in the first sample at 0 hour, but decreased to 2,430 $\mu\text{g}/\text{m}^3$ by the end of the step test. Also, ethylbenzene was initially measured at 1,300 $\mu\text{g}/\text{m}^3$, and dropped to 240 $\mu\text{g}/\text{m}^3$ by the end of the test. Some toluene was also present, but in significantly less concentration. Well VW-17d-95.5 also had higher concentrations of total xylene and ethylbenzene at the start of the step test (1,850 $\mu\text{g}/\text{m}^3$), but 88% was removed by the end of the step test. For the remaining wells, low VOC concentrations were detected during the first four hours of the step-test. The sources of the BTEX detections are not known and may be a result of laboratory contamination, background air contamination or other unknown sources in the subsurface. However, given the low detection levels and the lack of historic groundwater BTEX detections, these results are not believed to be significant.

By far, the largest VOC constituent detected was TCE. For wells VW-75d-42.5, VW-75d-75, VW-75d-95.5, and MW-17ds, TCE concentration increases were measured at the end of the four-hour tests. VOC data for each of the wells are summarized in Table 1, and analytical laboratory reports are provided in Attachment B.

Long-Term Test Results

The long-term test was operated for a week on wells VW-17d-42.5, VW-17d-75, VW-17d-95.5, and MW-17ds, following the conclusion of the step tests. The target and average flow rate and applied pressure readings observed during the long-term test are summarized in Table 2, and daily test readings are provided in Table 3.

Throughout the long-term test, the flow rates were relatively stable near the optimal flow rates (Figure 3). The lower flow rates per foot of screen observed in VW-17d-95.5 and MW-17ds were likely due to a rise in the ground water level which decreased the available screen length (See Table 4).

As shown in Table 4, the water level in MW-17ds rose above the top of screen during the long-term test. The saturated well screen made the well ineffective in drawing soil vapor. Since the screen was saturated, the source of the airflow is not known. Additionally, available screen length in VW-17d-95.5 was decreased from 20 to 14 feet during the test due to rising water levels during the test. Finally, a small amount of water detected in the extractor piping from VW-17d-42.5 and approximately 2 feet of water was detected in the well casing of VW-17d-75. The source of the water is likely the result of vapor condensation (as opposed to groundwater), as the wells are screened in the unsaturated zone.

TCE was the most abundant VOC detected in the vapor samples (Table 5). Over the test duration, concentrations of TCE typically increased for 24 to 72 hours, then showed a gradual decrease by the end of the test (Figure 4). An exception to this trend was an increase in the TCE concentration observed at 168 hours at MW-17-ds. Similar to the step test, total xylenes and ethylbenzene concentrations continued to drop in VW-17d-95 during the long-term test with ethylbenzene dropping below detection level and total xylene dropping to $25 \mu\text{g}/\text{m}^3$ by the end of the long term test.

One week after shutting down the SVE pilot system, the system was restarted at the same vacuum and flow conditions as the long-term test and vapor samples were collected to observe if soil vapor concentrations rebounded. VW-17d-95.5, VW-17d-75, and MW-17ds showed slight drops in cVOC concentrations, while cVOC concentrations nearly doubled in VW-17d-42.5.

Both PCE and three isomers of DCE were detected in nearly every sample except VW-17d-42.5 which lacked 1,1-dichloroethene and trans-1,2-dichloroethene. Vinyl chloride was not detected in the samples. Analysis of PCE, TCE, and DCE mass removal rates indicate that VW-17d-75 and VW-17d-95.5 were the most productive wells in removing mass during the study, while VW-17d-42.5 and MW-17ds were significantly less productive (Table 6). Both MW-17ds and VW-17d-42.5 exhibited low flow rates and low cVOC concentrations, which lead to the limited mass removal rates.

Based upon our experience, the TCE concentrations, which are the primary contaminant, in soil gas are not at levels that are indicative of TCE source zone that is dissolved/sorbed in the

unsaturated zone between to the two aquifers. The TCE groundwater concentration in MW-17ds, which is located within 20 feet of the pilot test wells, is approximately 50 µg/L. Assuming groundwater temperature of 15°C, the vapor source concentration from partitioning product would be approximately 13,000 µg/m³. Therefore, the measured TCE concentrations during the SVE test (1,000-10,000 µg/m³) are consistent with a groundwater source given that the sample depths are above the groundwater interface. In addition, TCE soil gas concentrations in the 95-foot, 75-foot, and 42.5-foot wells show a correlated pattern in which the largest concentration is almost always measured in the deep well (95-foot) and concentrations decrease with decreasing depth, which is suggestive of a groundwater source that is attenuating as the distance from the source increases.

CONCLUSIONS

Overall 285 grams (0.63 lbs) of TCE was removed during a weeklong SVE pilot test performed on wells VW-17d-42.5, VW-17d-75, VW-17d-95.5, and MW-17ds. Based on these results, soil vapor extraction is effective in removing TCE mass from the vadose zone of the Upper TSA. We recommend that an evaluation be conducted on the possible implementation of a long-term SVE system for wells VW-17d-42.5, VW-17d-75, and VW-17d-95.5. The evaluation will include anticipated mass removal rates, capital and O&M expenses, and potential impacts to the current groundwater VOC concentrations in the Mound Area.

It is expected that the SVE system would be operated for approximately six-months. Based on total TCE mass removed and impact on the groundwater after six months of operation, an evaluation would be made of the potential efficacy of continued operation of the system and/or additional SVE well locations.

REFERENCES

Geosyntec, 2014. Work Plan for Soil Vapor Extraction Pilot Test, East Multnomah County Troutdale Sandstone Aquifer Remediation, 26 March 2014.

Oregon Department of Environmental Quality (DEQ), 2014. Email from B. Williams, Approval of Soil Vapor Extraction Pilot Test Work Plan, 30 April 2014.

DEQ, 1997. TSA Remedy Order on Consent, WMCSR-NWR-96-08, 14 February 1997.

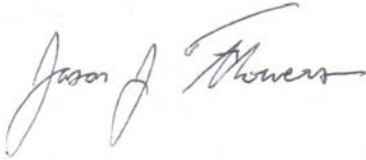
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Attachments:

Figure 1	TSA Remediation Vapor Extraction Site Map
Figure 2	Step Test Flow versus Vacuum Relationship
Figure 3	Extraction Well Flow Rates
Figure 4	Extracted cVOC Vapor Concentration
Table 1	Step Test TCE Concentrations
Table 2	Long-Term Test Flow Rates
Table 3	Long-Term Test Field Data
Table 4	SVE Well Water Levels
Table 5	Long-Term Test cVOC Vapor Concentrations
Table 6	Extracted cVOC Mass
Attachment A	Step-Test Field Data
Attachment B	Vapor Analytical Laboratory Data and Data Validation Report

TSA Soil Vapor Extraction Test Results
Page 7
30 October 2014

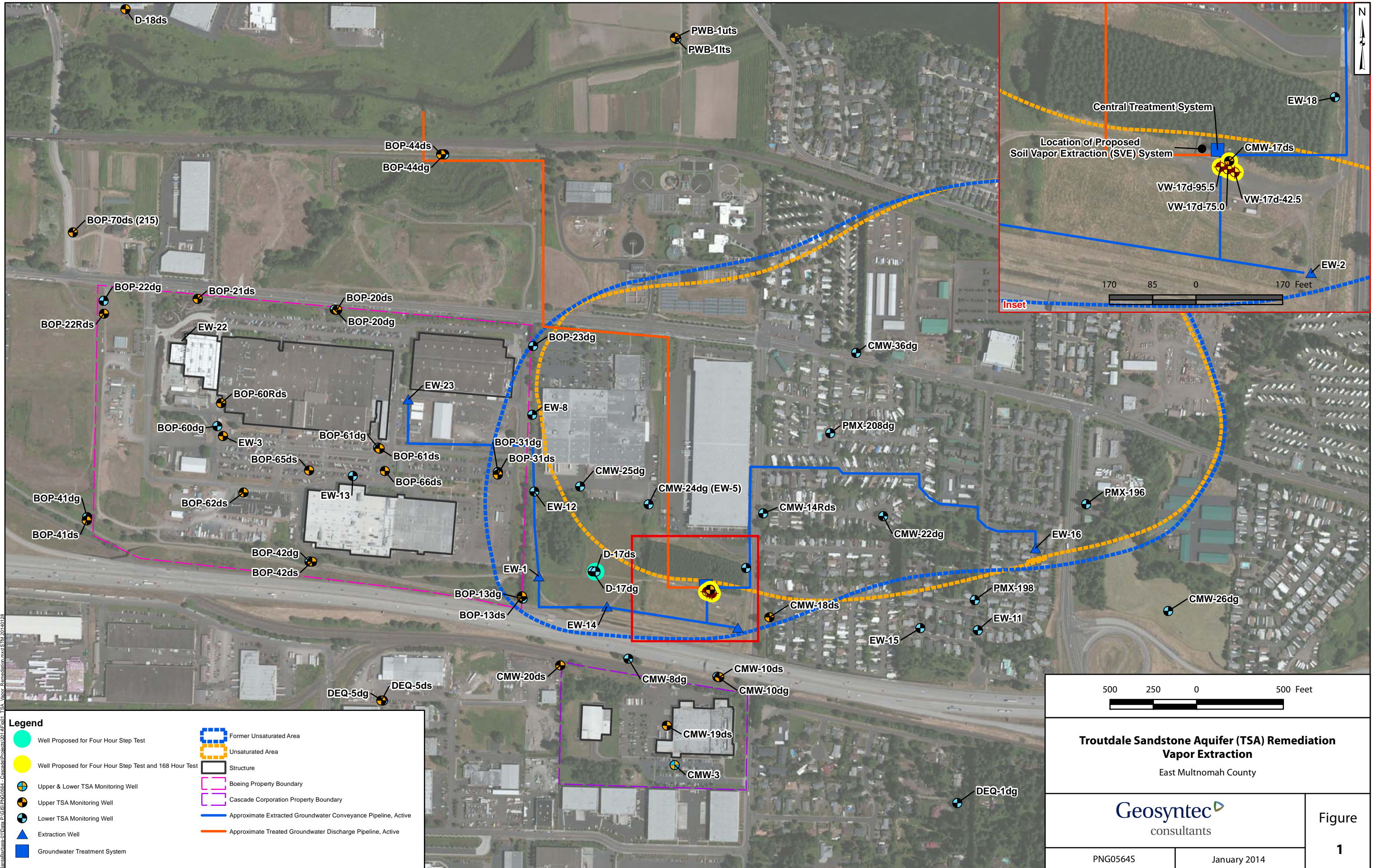
Reviewed and Approved by:

A handwritten signature in black ink that reads "Jason J. Flowers". The signature is written in a cursive style with a large, sweeping initial "J".

Jason Flowers, Ph.D., P.E.,
Project Engineer

A handwritten signature in black ink that reads "Brent Miller". The signature is written in a cursive style with a large, sweeping initial "B".

Brent Miller, PE
Associate Engineer



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Legend

- Well Proposed for Four Hour Step Test
- Well Proposed for Four Hour Step Test and 168 Hour Test
- Upper & Lower TSA Monitoring Well
- Upper TSA Monitoring Well
- Lower TSA Monitoring Well
- ▲ Extraction Well
- Groundwater Treatment System
- Former Unsaturated Area
- Unsaturated Area
- Structure
- Boeing Property Boundary
- Cascade Corporation Property Boundary
- Approximate Extracted Groundwater Conveyance Pipeline, Active
- Approximate Treated Groundwater Discharge Pipeline, Active

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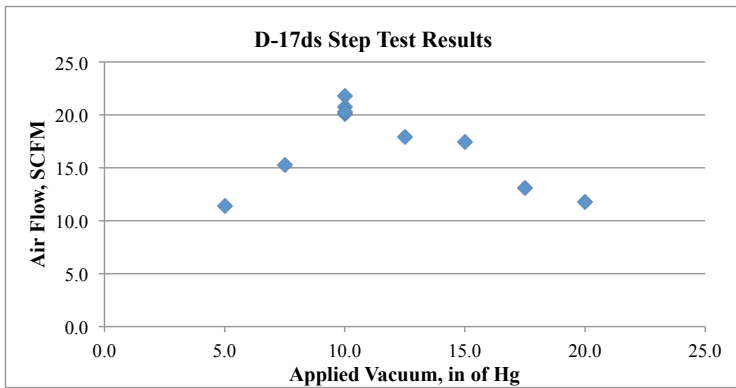
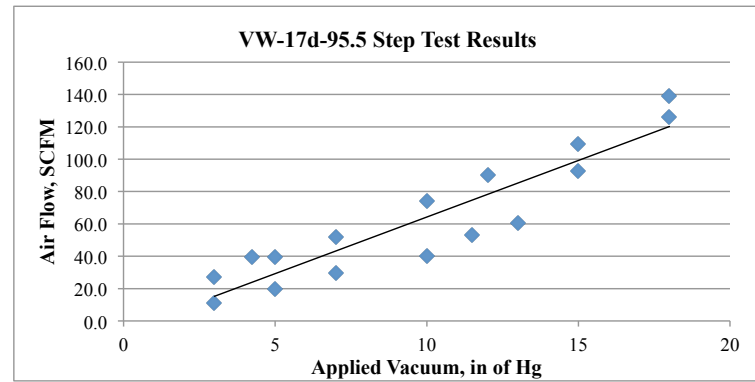
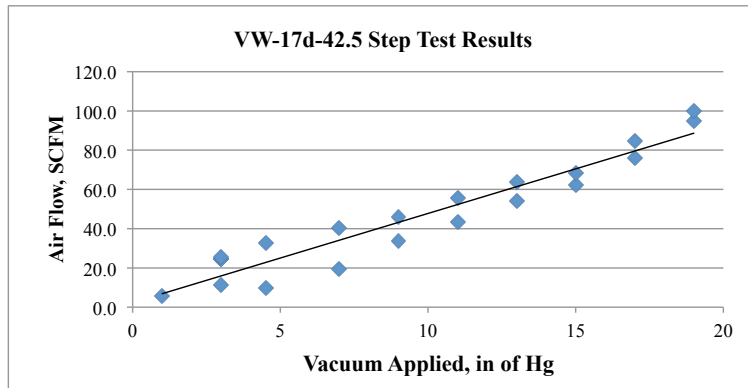
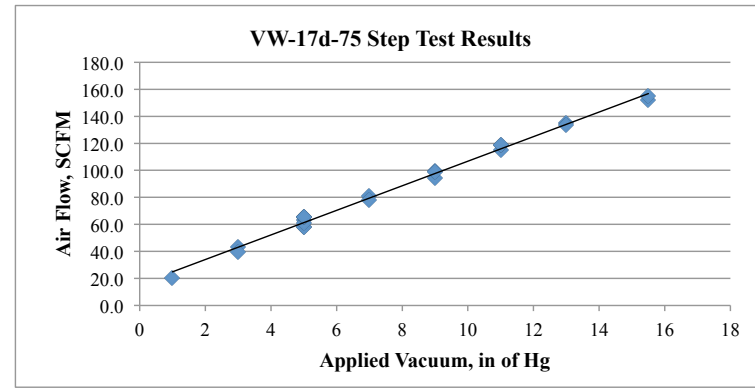
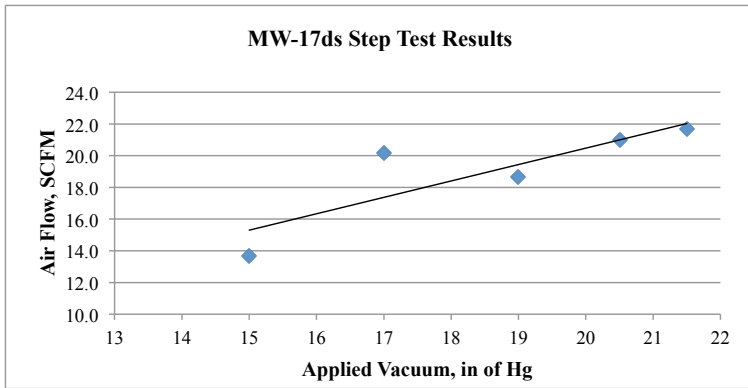
Troutdale Sandstone Aquifer (TSA) Remediation Vapor Extraction
 East Multnomah County

Geosyntec consultants

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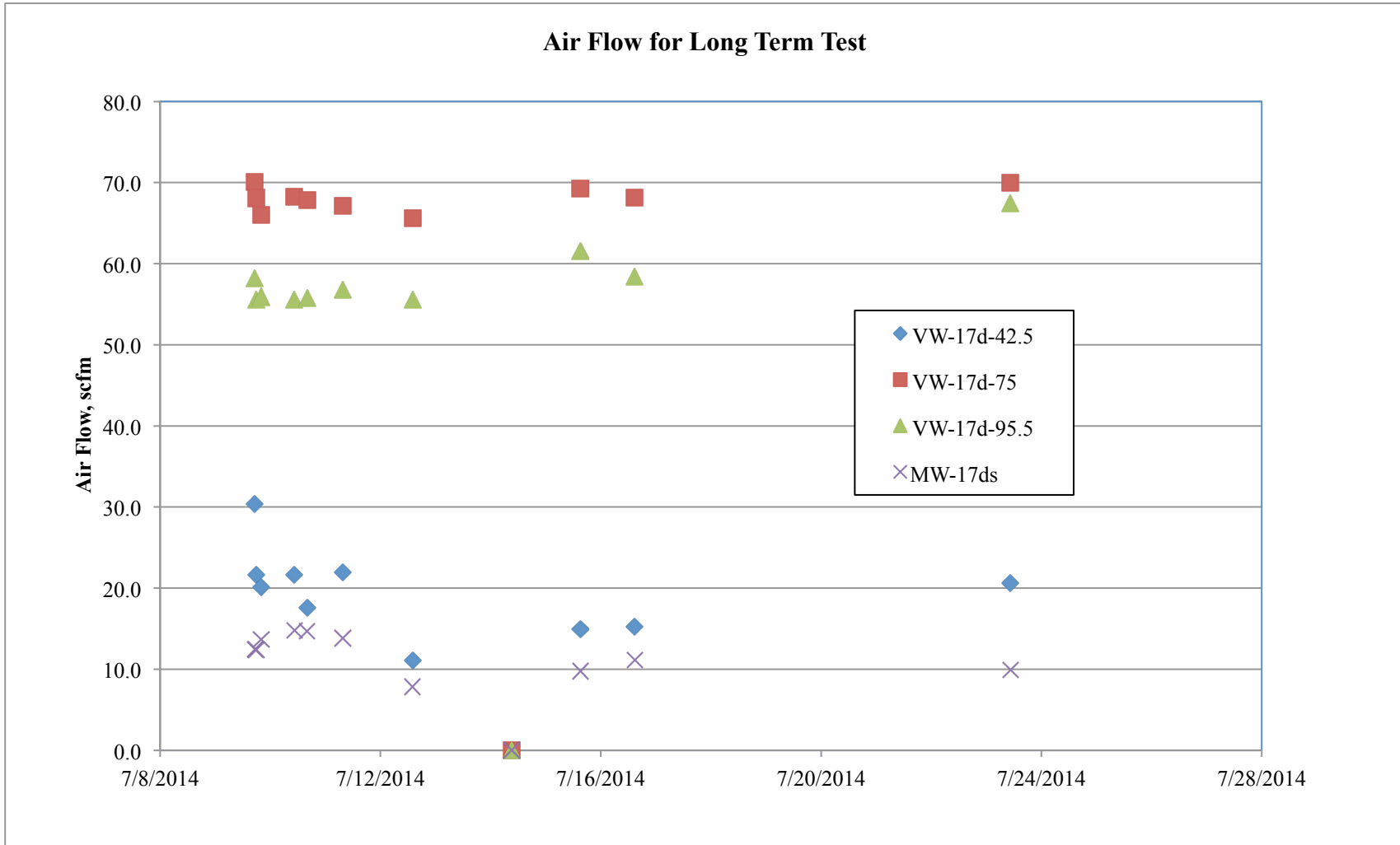
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Figure 2
Step Test Flow versus Vacuum Relationship
 Cascade TSA - Fairview, Oregon



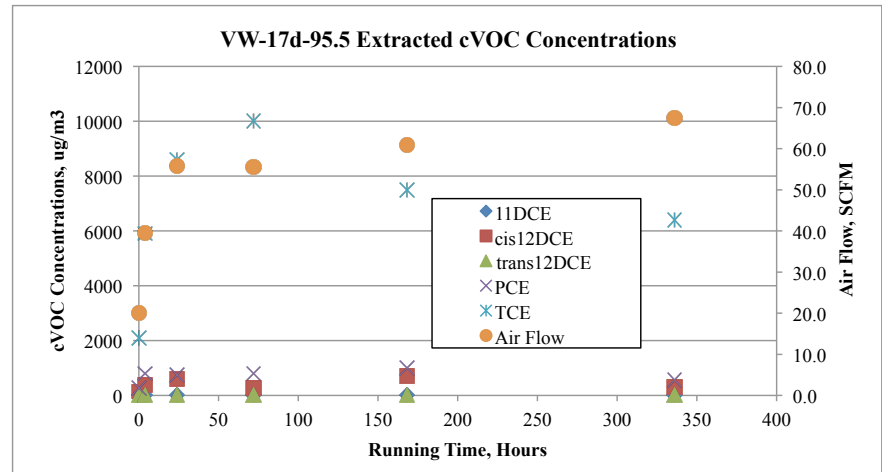
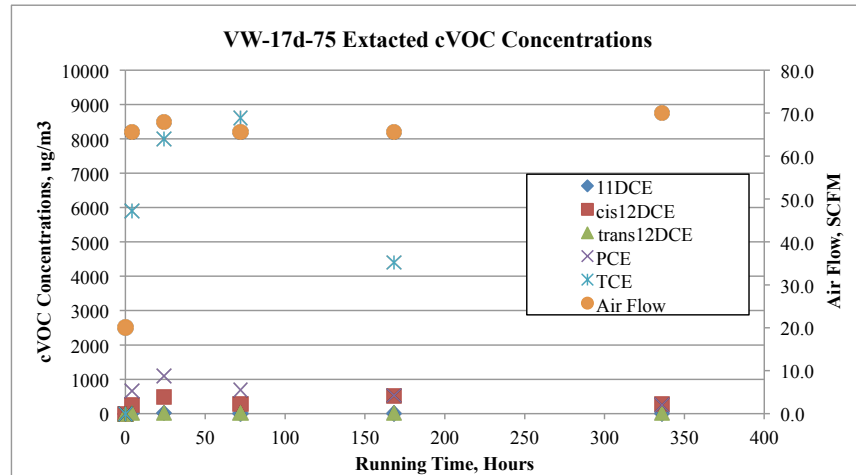
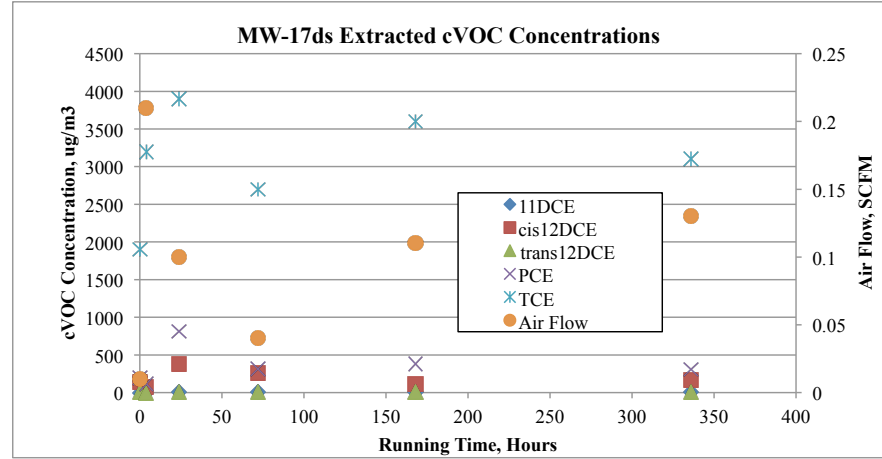
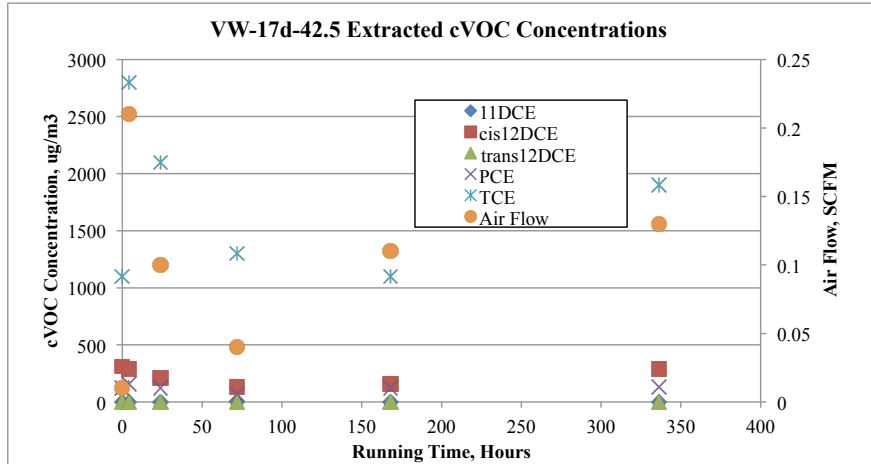
Notes:
 scfm=standard cubic feet per minute
 in Hg = inches of mercury

Figure 3
Extraction Well Flow Rates
Cascade TSA - Fairview, Oregon



Notes:
scfm=standard cubic feet per minute

Figure 4
 Extracted cVOC Vapor Concentration
 Cascade TSA - Fairview, Oregon



Notes:
 ug/m³ = micrograms per cubic meter
 cVOC = chlorinated volatile organic compounds

Table 1
Step Test TCE Concentrations
Cascade TSA - Fairview, Oregon

Well	TCE Concentrations ($\mu\text{g}/\text{m}^3$)	
	Start (0 hr)	End (4 hr)
D-17ds	<21.4	<2.14
VW-17d-42.5	1,100	2,800
VW-17d-75	<2.14	5,900
VW-17d-95.5	2,100	5,900
MW-17ds	1,900	3,200

Notes:

TCE = trichloroethene

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

hr = hour

Table 2
Long Term Test Flow Rates
Cascade TSA - Fairview, Oregon

Well	Anticipated Flow Rate¹ (scfm)	Average Flow Rate (scfm)	Average Applied Vacuum (in Hg)
VW-17d-42.5	5	19.4	5.6
VW-17d-75	20	67.8	6.5
VW-17d-95.5	20	58.3	6.3
MW-17ds	5	11.8	13.4

Notes:

scfm=standard cubic feet per minute

in Hg = inches of mercury

¹Estimated value included in Pilot Test Work Plan (Geosyntec, 2014) based on one scfm per foot of well screen.

Table 3
Long-Term Test Field Data
Cascade TSA - Fairview, Oregon

PILOT TEST TIME												
Date and Time		7/9/2014 17:15	7/9/2014 18:00	7/9/2014 20:00	7/10/2014 10:30	7/10/2014 16:00	7/11/2014 7:30	7/12/2014 14:00	7/14/2014 9:10	7/15/2014 15:10	7/16/2014 14:50	7/23/2014 10:30
Running Time	Hours	4	4.75	6.75	21.25	26.75	42.25	72.75	115.92	145.92	169.58	333.25
VACUUMS	---											
SVE System Inlet		---	---	---	---	14.5	---	14.5	14.5	14.5	14	14
VW-17d-42.5	in Hg	5.0	3	3.25	6	6.5	6.75	6.25	7	7	6	5
VW-17d-75	in Hg	6.0	6.5	6.5	6.75	6.5	6.5	6.5	6.5	6.5	6.5	6.5
VW-17d-95.5	in Hg	7.5	7.5	7.5	7.25	7	6.25	6	5	5	5	6
MW-17ds	in Hg	12.5	13.5	13.5	14	13.75	14	13.5	13	13.5	13	13.5
FLOW RATES												
VW-17d-42.5	in H2O	0.3	0.15	0.13	0.15	0.1	0.15	0.04	---	0.07	0.075	0.13
VW-17d-75	in H2O	1.6	1.5	1.4	1.5	1.5	1.4	1.4	---	1.5	1.5	1.5
VW-17d-95.5	in H2O	1.1	1	1	1	1	1	1	---	1.2	1.1	1.4
MW-17ds	in H2O	0.05	0.05	0.06	0.07	0.07	0.06	0.02	---	0.03	0.04	0.03
VW-17d-42.5	scfm	30.4	21.6	20.1	21.7	17.6	22.0	11.1	---	14.9	15.2	20.6
VW-17d-75	scfm	70.1	68.1	66.0	68.3	67.9	67.1	65.6	---	69.2	68.2	69.9
VW-17d-95.5	scfm	58.2	55.5	55.9	55.6	55.7	56.8	55.6	---	61.5	58.4	67.4
MW-17ds	scfm	12.4	12.4	13.7	14.8	14.7	13.8	7.9	---	9.8	11.1	9.9
VW-17d-42.5	fpm	1660	1115	1010	750	825	720	740	---	800	865	820
VW-17d-75	fpm	3330	3330	3130	3230	3250	3215	3165	---	3135	3190	3200
VW-17d-95.5	fpm	3150	2900	2980	2780	2870	3000	3230	---	3310	3410	3880
MW-17ds	fpm	100.7	188	90	950	350	280	340	---	310	330	396
VW-17d-42.5	scfm	36.2	24.3	22.0	16.4	18.0	15.7	16.1	---	17.5	18.9	17.9
VW-17d-75	scfm	72.6	72.6	68.3	70.5	70.9	70.1	69.0	---	68.4	69.6	69.8
VW-17d-95.5	scfm	68.7	63.3	65.0	60.7	62.6	65.4	70.5	---	72.2	74.4	84.6
MW-17ds	scfm	2.2	4.1	2.0	20.7	7.6	6.1	7.4	---	6.8	7.2	8.6
TEMPERATURE												
VW-17d-42.5	Deg F	94	87	88	85	93	69	93.5	---	77.9	91.3	63.2
VW-17d-75	Deg F	96	92	88	89	96	70	95.2	---	74.1	91.2	63.5
VW-17d-95.5	Deg F	94	94	86	93	89.7	70	92.3	---	80.7	90.2	65.3
MW-17ds	Deg F	91.4	94	87	87	94	75	92.1	---	78.2	90.7	63.8
VOCs DETECTED WITH PID												
VW-17d-42.5	ppm	---	---	---	1.6	1.7	1.2	1.4	---	0.09	1	1.2
VW-17d-75	ppm	---	---	---	4.5	5	4.3	5.2	---	3.4	3.1	3.7
VW-17d-95.5	ppm	---	---	---	4.3	5.7	4.2	5.5	---	3.6	3.3	4.2
MW-17ds	ppm	---	---	---	0.8	0.7	1.3	3.7	---	1.2	1.1	1.9
Ambient Air	ppm	---	---	---	0.3	0.3	0.3	0.1	---	0.1	0.2	0.4

Abbreviations:
scfm = standard cubic feet per minute
in Hg = inches of mercury
in H2O = inches of water
fpm = feet per minute
Deg F= Degrees Fahrenheit
PID = photoionization detector
ppm = parts per million

Note:
Shaded scfm values are calculated from the field data in the rows above.

Table 4
SVE Well Water Levels
Cascade TSA - Fairview, Oregon

Well	Top of Screen	Bottom of Screen	Pre-Test Water Level¹	End of Test Water Level²	Water Level One Week after Test³
VW-17d-95.5	44.5	24.5	NM	30.49	26.75
MW-17ds	23.5	13.5	19	27.66	19.45

Notes:

Water levels shown in feet above mean sea level (feet amsl)

NM = not measured (no water present)

¹Measured during February 2014 groundwater sampling event.

²Measured July 16, 2014, prior to shutdown of the test.

³Measured July 23, 2014, one week after test completion before rebound testing.

Table 5
Long-Term Test cVOC Vapor Concentrations
Cascade TSA - Fairview, Oregon

Well	Sample Time Frame	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE
MW-17ds	0 hour	<1.60	140	3.6	190	1900
	4 hour	<1.60	71	<1.59	110	3200
	24 hour	10	380	11	810	3900
	72 Hour	9.9	260	9.5	320	2700
	168 Hour	5.2	120	4.4	380	3600
	Rebound	11	170	13	310	3100
VW-17d-42.5	0 hour	<1.60	310	<1.59	120	1100
	4 hour	<1.60	290	<1.59	160	2800
	24 hour	<1.6	210	<1.59	120	2100
	72 Hour	<1.6	130	<1.59	68	1300
	168 Hour	<1.60	160	<1.59	120	1100
	Rebound	<1.60	290	1.6	130	1900
VW-17d-75	0 hour	<1.60	<1.59	<1.59	<2.72	<2.14
	4 hour	9.1	260	8.3	670	5900
	24 hour	14	480	15	1100	8000
	72 Hour	7.1	270	10	680	8600
	168 Hour	5.2	520	15	530	4400
	Rebound	5.9	270	17	260	3100
VW-17d-95	0 hour	4	140	4	280	2100
	4 hour	11	370	10	810	5900
	24 hour	17	590	16	750	8600
	72 Hour	8.7	260	9.5	810	10000
	168 Hour	12	710	18	1000	7500
	Rebound	9.5	310	15	570	6400

Notes:

Concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

cVOC = chlorinated volatile organic compounds

DCE = dichloroethene

TCE = trichloroethene

PCE = tetrachloroethene

Table 6
Extracted cVOC Mass
Cascade TSA - Fairview, Oregon

Well	Average Concentration ($\mu\text{g}/\text{m}^3$)			Total Mass Removed ² (grams)
	TCE	PCE	DCE ¹	
VW-17d-42.5	1,717	120	232	8
VW-17d-75	6,000	648	381	152
VW-17d-95.5	6,750	703	419	159
MW-17ds	3,067	353	207	11
Mass Removed (grams)	285	29	17	330

Notes:

cVOC = chlorinated volatile organic compounds

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

DCE = dichloroethene

TCE = trichloroethene

PCE = tetrachloroethene

¹DCE Concentration is sum of 1,1-DCE, cis-1,2-DCE, and trans-1,2-DCE.

²Total mass removed is the sum of PCE, TCE, and DCE removed during the week long test.

Attachment A
Step-Test Field Data

**Attachment A - Table 1
D-17ds Step-Test Field Data
Cascade Corporation, Fairview, OR**

	Units	Test Time										
Date	---	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014	7/7/2014
Time	---	12:02	13:10	13:54	14:00	14:02	14:04	14:05	14:06	14:08	15:15	15:58
Test time	hrs	0	1:08	1:52	1:58	2:00	2:02	2:03	2:04	2:06	3:13	3:56
VACUUMS	---											
D-17ds	in H ₂ O	10.0	10.0	5.0	7.5	10.0	12.5	15.0	17.5	20.0	10.0	10
FLOW RATES												
D-17ds	ft/min	NA	920	520	700	950	820	800	600	540	930	1000
	scfm	NA	20.1	11.3	15.3	20.7	17.9	17.5	13.1	11.8	20.3	21.8
TEMPERATURE												
	F	95	97	---	---	---	---	---	---	---	---	89

Note:
Shaded scfm values are calculated from the field data in the row above.

Attachment A - Table 2
MW-17ds Step-Test Field Data
Cascade Corporation, Fairview, OR

	Units	Test Time													
Date	---	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014
Time	---	13:14	13:25	13:35	13:45	13:50	14:23	15:23	15:39	15:44	15:51	15:57	16:45	17:00	
Test time	hrs	0	0:11	0:21	0:31	0:36	1:09	2:09	2:25	2:30	2:37	2:43	3:31	3:46	
VACUUMS	---														
MW-17ds	in H₂O	17	19	21	22	15	15	14.5	17	19.5	21.5	15	15	11	
VW-17d-42.5	in H ₂ O	0.1	0.1	0.1	0.0	0	0	-0.15	-0.16	-0.18	-0.16	-0.19	-0.24	--	
VW-17d-75	in H ₂ O	0.0	0.0	-0.4	-0.4	-0.48	-0.62	-0.8	-0.86	-0.9	-0.9	-0.95	-1.2	--	
VW-17d-92.5	in H ₂ O	0.0	0.0	-0.4	-0.4	-0.48	-0.62	-0.8	-0.88	-0.92	-0.92	-0.95	-1.2	--	
FLOW RATES															
	ft/min	80	50	54	50	37	31	33	50	270	105	110	50	--	
	scfm	1.7	1.1	1.2	1.1	0.8	0.7	0.7	1.1	5.9	2.3	2.4	1.1	--	
	in H ₂ O	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	
	scfm	20.2	18.6	21.0	21.7	13.7	13.7	12.4	15.7	18.5	20.9	13.7	4.3	12.4	
TEMPERATURE															
	F	86	81	83	85	87	87	95	91	90	88.8	88	93	93	

Note:
Shaded scfm values are calculated from the field data in the row above.

**Attachment A - Table 3
VW-17d-75 Step-Test Field Data
Cascade Corporation, Fairview, OR**

	Units	Test Time											
Date	---	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014
Time	---	13:55	14:14	14:18	14:20	14:22	14:23	14:23	14:25	14:29	15:29	16:25	
Test time	hrs	0	0:19	0:23	0:25	0:27	0:28	0:28	0:30	0:34	1:34	2:30	
VACUUMS	---												
VW-17d-75	in Hg	1	3	5	7	9	11	13	15.5	5	5	5	
MW-17ds	in Hg	0.2	--	--	--	--	--	--	--	0.125	0.06	0.65	
VW-17d-42.5	in Hg	0.0	--	--	--	--	--	--	--	0	0	0	
VW-17d-95.5	in Hg	0.8	--	--	--	--	--	--	--	2.8	2.3	2.9	
FLOW RATES													
	ft/min	950	1900	2990	3550	4330	5000	5850	6260	2930	2750	2750	
	scfm	20.7	41.5	65.2	77.4	94.5	109.1	127.6	136.6	63.9	60.0	60.0	
	in H2O	0.1	0.6	1.3	2.1	3.2	4.3	5.9	7.5	1.1	1.1	1.2	
	scfm	20.0	43.2	63.6	80.8	99.7	115.0	135.1	152.4	58.3	58.2	60.8	
TEMPERATURE													
	F	92.4	89	88.8	89.2	89.1	88.6	91.5	91.5	92.2	95	94	

	Units	Test Time											
Date	---	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014
Time	---	16:30	16:38	16:44	16:48	16:54	16:54	17:08	17:37	17:45	17:50	17:50	
Test time	hrs	2:35	2:43	2:49	2:53	2:59	2:59	3:13	3:42	3:50	3:55	3:55	
VACUUMS	---												
VW-17d-75	in Hg	7	9	11	13	15.5	3	5	5	9	11	5	
MW-17ds	in Hg	0.55	0.5	0.9	0.9	0.95	1	0.75	0.04	0.06	0.05	0.05	
VW-17d-42.5	in Hg	0	0	0	0	0	0	0	0	0	0	0	
VW-17d-95.5	in Hg	3.3	3.7	4.25	4.6	5	2.5	2.8	3	3.8	4.2	3.2	
FLOW RATES													
	ft/min	3450	4130	4830	5400	6000	1830	2800	2900	4270	5200	3000	
	scfm	75.3	90.1	105.4	117.8	130.9	39.9	61.1	63.3	93.2	113.4	65.4	
	in H2O	2.0	2.9	4.6	5.8	7.8	0.5	1.4	1.4	3.2	4.6	1.4	
	scfm	78.3	94.5	119.1	133.6	155.1	39.2	65.6	65.6	99.0	118.9	65.6	
TEMPERATURE													
	F	97	94	94	95	93.7	95	95	96	97	95.7	95	

Note:
Shaded scfm values are calculated from the field data in the row above.

Attachment A - Table 4
VW-17d-42.5 Step-Test Field Data
Cascade Corporation, Fairview, OR

	Units	Test Time											
Date	---	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014
Time	---	7:15	8:05	8:14	8:20	8:25	8:29	8:35	8:40	8:45	8:50	8:55	9:50
Test time	hrs	0	0:50	0:59	1:05	1:10	1:14	1:20	1:25	1:30	1:35	1:40	2:35
VACUUMS	---												
VW-17d-42.5	in Hg	1	3	5	7	9	11	13	15	17	19	3	3
MW-17ds	in Hg	0.3	0.3	0.5	0.4	0.42	0.45	0.45	0.46	0.46	0.46	0.45	0.4
VW-17d-75	in Hg	0.8	0.8	0.8	0.8	0.75	0.75	0.75	0.75	0.75	0.71	0.75	0.65
VW-17d-95.5	in Hg	0.8	0.8	0.8	0.8	0.75	0.75	0.75	0.75	0.76	0.74	0.75	0.67
FLOW RATES													
	ft/min	105	260	480	875	1330	1785	2300	2800	3210	out of range	1100	1140
	scfm	2.3	5.7	10.5	19.1	29.0	38.9	50.2	61.1	70.0	--	24.0	24.9
	in H2O	0.0	0.0	0.0	0.1	0.4	0.6	0.9	1.2	1.8	2.8	0.2	0.2
	scfm	5.6	11.4	9.8	19.7	33.6	43.3	53.9	62.2	75.9	94.7	24.5	24.3
TEMPERATURE													
	F	75.8	70	70	70	70	68	68	69.3	73	73	79	88

	Units	Test Time											
Date	---	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014	7/9/2014
Time	---	9:53	9:56	10:00	10:04	10:13	10:17	10:22	10:25	10:30	11:24	11:33	11:37
Test time	hrs	2:38	2:41	2:45	2:49	2:58	3:02	3:07	3:10	3:15	4:09	4:18	4:22
VACUUMS	---												
VW-17d-42.5	in Hg	5	7	9	11	13	15	17	19	3	3	9	15
MW-17ds	in Hg	0.4	0.4	0.4	0.4	0.4	0.35	0.32	0.3	0.3	0.054	0.1	0.1
VW-17d-75	in Hg	0.7	0.6	0.6	0.6	0.6	0.55	0.55	0.52	0.5	0.3	0.3	0.3
VW-17d-95.5	in Hg	0.7	0.7	0.65	0.62	0.62	0.6	0.55	0.55	0.55	0.35	0.3	0.3
FLOW RATES													
	ft/min	1490	1900	2360	Unstable	Unstable	Unstable	Unstable	Unstable	1220	1300	2340	out of range
	scfm	32.5	41.5	51.5	--	--	--	--	--	26.6	28.4	51.1	--
	in H2O	0.3	0.5	0.7	1.0	1.3	1.5	2.3	3.2	0.2	0.2	0.8	1.7
	scfm	32.7	40.2	46.1	55.6	63.6	68.3	84.8	99.9	25.5	24.9	48.2	72.8
TEMPERATURE													
	F	82	90	87	92	89	89	85.5	87	91	92	92	88

Note:
Shaded scfm values are calculated from the field data in the row above.

Abbreviations
Unstable = Meter readings were unstable which prevented determining an accurate reading
out of range= The measurement was outside the calibrated range of the equipment

Attachment A - Table 5
VW-17d-95.5 Step-Test Field Data
Cascade Corporation, Fairview, OR

	Units	Test Time															
Date	---	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/14	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014
Time	---	9:40	10:22	10:26	10:37	10:40	10:49	10:55	11:00	11:23	12:32	12:35	12:42	12:45	12:49	12:54	13:13
Test time	hrs	0	0:42	0:46	0:57	1:00	1:09	1:15	1:20	1:43	2:52	2:55	3:02	3:05	3:09	3:14	3:33
VACUUMS		---															
VW-17d-92.5	in Hg	5	3	7	10	12	13	15	18	5	3	7	10	12	15	18	4.24
MW-17ds	in H2O	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.02	0.05	0.05	0.27	1	1.5
VW-17d-42.5	in Hg	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0	0	0	0	0	
VW-17d-75	in Hg	0.3	0.4	0.7	0.9	1.0	1.8	2.2	2.9	1.9	1.4	1.7	2	2.4	2.8	3.1	2.4
FLOW RATES																	
	ft/min	1060	620	1500	2090	2600	3200	4250	5050	2360	1500	2720	3850	4270	4830	5550	2315
	scfm	23.1	13.5	32.7	45.6	56.7	69.8	92.7	110.2	51.5	32.7	59.3	84.0	93.2	105.4	121.1	50.5
	in H2O	0.1	0.0	0.3	0.5	0.9	1.2	2.7	5.0	0.5	0.2	0.9	1.8	2.6	3.8	6.2	0.5
	scfm	20.0	11.3	29.8	39.8	53.2	60.4	92.6	126.2	39.8	26.9	52.0	74.2	90.4	109.2	139.4	39.6
TEMPERATURE																	
	F	75	77	79	78.4	77.5	78	77.1	75.5	80	81	83	82.7	82.8	83.6	84.7	84

Note:
Shaded scfm values are calculated from the field data in the row above.

Attachment B
Vapor Analytical Laboratory Data
Data Validation Report

M e m o r a n d u m

Date: 17 September 2014
To: Cindy Bartlett, RG, LG, Geosyntec Consultants, Portland, Oregon
From: Geosyntec Quality Assurance Group, Knoxville, Tennessee
Subject: **Stage 2A Data Validation - Level II Data Deliverables – ESC Lab
Sciences Work Orders: L709812, L710384, L710967, and L712227**

SITE: Cascade Corp, Utah; Job No: PNG0564S14

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-six soil vapor samples, two field duplicates, one field blank, and one trip blank collected on July 9-23, 2014 as part of the site investigation activities for the Cascade Corp, Utah project. ESC Lab Sciences (ESC), Mt. Juliet, Tennessee provided the analytical services.

The samples were analyzed for the following test:

- EPA Method TO-15 - Volatile Organic Compounds (VOCs).

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives.

The organic data were reviewed based on USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008 (USEPA-540-R-08-01), as well as by the pertinent methods referenced by the data package and professional judgment.

The following samples were analyzed in the data set:

Laboratory ID	Sample ID
L709812-01	D-17DS-070714-0HR
L709812-02	D-17DS-070714-4HR
L709812-03	VW-17D-92.5-070814-0HR
L709812-04	VW-17D-92.5-070814-4HR
L709812-05	DUP#1 070814
L709812-06	VW-17D-75-070814-0HR
L709812-07	VW-17D-750-070814-4HR
L709812-08	VW-17D-42.5-070914-0HR
L709812-09	VW-17D-42.5-070914-4HR
L709812-10	MW-17DS-070914-0HR
L709812-11	MW-17DS-070914-4HR
L709812-12	MW-17DS-071014-24HR
L709812-13	VW-17D-95.5-071014-24HR
L709812-14	VW-17D-75-071014-24HR
L709812-15	DUP#2-071014
L709812-16	VW-17D-42.5-071014-24HR
L710384-01	VW-17D-75-071214-72HR

Laboratory ID	Sample ID
L710384-02	VW-17D-42.4-071214-72HR
L710384-03	VW-17D-95.5-071214-72HR
L710384-04	MW17DS-071214-72HR
L710967-01	MW-17DS-071614-168HR
L710967-02	VW-17D-95.5-071614-168HR
L710967-03	VW-17D-75-071614-168HR
L710967-04	VW-17D-42.5-071614-168HR
L712227-01	MW17DS-072114-200HR
L712227-02	VW-17D-072114-200HR
L712227-03	VW-17D-95.5-072314-REBOUND
L712227-04	VW-17D-75-072314-REBOUND
L712227-05	VW-17D-42.4-072314-REBOUND
L712227-06	MW-17DS-072314-REBOUND

Incorrect error corrections were observed on the chain of custody (COC) form. The proper procedure of a single strike-through correction and initials and date of the person making the corrections was not followed.

The following samples were identified incorrectly on the COC form and logged in per the COC form, with the exception of sample VW-17D-42.5-071614-168HR which was written incorrectly on the COC as VW-17D-42.4-071614-168HR, but was logged in with the correct sample ID by the laboratory. For this data validation report the samples were identified as reported by the laboratory.

COC Form Sample ID	Correct Sample ID
VW-17D-92.5-070814-0HR	VW-17D-95.5-070814-0HR
VW-17D-92.5-070814-4HR	VW-17D-95.5-070814-4HR
VW-17D-750-070814-4HR	VW-17D-75-070814-4HR
VW-17D-42.4-071214-72HR	VW-17D-42.5-071214-72HR
VW-17D-42.4-072314-REBOUND	VW-17D-42.5-072314-REBOUND

COC Form Sample ID	Correct Sample ID
VW-17D-42.4-071614-168HR	VW-17D-42.5-071614-168HR

1.0 VOLATILE ORGANIC COMPOUNDS

Twenty-six soil vapor samples, two field duplicates, one field blank, and one trip blank were analyzed for VOCs per EPA Method TO-15.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ⊗ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ⊗ Laboratory Control Sample
- ✓ Surrogates
- ⊗ Trip Blank
- ⊗ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

1.1.1 Completeness

The VOC data reported in this package are considered to be usable for meeting project objectives. The analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the project is 100%.

1.1.2 Analysis Anomaly

The laboratory did not document the sample canister vacuums before sampling or upon sample receipt. Therefore the integrity of the SUMMA canisters during shipment could not be verified with regard to leaks that may have occurred during shipment. Qualifications were not applied to the data based on this, but this should be taken into consideration when using the data.

1.2 Holding Time

The holding time for the VOC analysis of a SUMMA canister air sample is 30 days from collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Eighteen method blanks (batches WG732486, WG732659, WG732671, WG732843, WG732841, WG733187, WG733383, WG732839, WG733105, WG733120, WG733360, WG734285, WG734307, WG734478, WG734671, WG734755, WG734873, and WG735009) were reported with the data sets. VOCs were not detected in the method blanks above the reported detection limits (RDLs).

1.4 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Eighteen LCS/LCS duplicate (LCSD) pairs were reported with the data sets. The results for the LCS/LCSD pairs were within the laboratory specified acceptance criteria for recovery and relative percent difference (RPD), with the following exceptions.

In batch WG732486 in laboratory report L709812, the recoveries of benzyl chloride (137%/141%) were high and outside the laboratory specified acceptance criteria. Since benzyl chloride was not detected in the associated samples, no qualifications were applied to the data.

In batch WG732671 in laboratory report L709812, the recoveries of benzyl chloride (134%/137%) were high and the recoveries of dichlorodifluoromethane (Freon 12) (66.7%/62%) were low, all outside the laboratory specified acceptance criteria in the LCS/LCSD pair. Since benzyl chloride was not detected in the associated samples, no qualifications were applied to the benzyl chloride results. However, the detected concentrations of Freon 12 in the associated samples were J qualified as estimated.

In batch WG732839 in laboratory report L710967, the recoveries of benzyl chloride (150%/141%) and the RPD of Freon 12 (27.7%) were high and outside the laboratory specified acceptance criteria in the LCS/LCSD pair. Since benzyl chloride and Freon 12 were not detected in the associated sample, no qualifications were applied to the data.

In batch WG733105 in laboratory report L710967, the recoveries of benzyl chloride (133%/159%) in the LCS/LCSD pair were high and the recoveries of Freon 12 (65%) were low in the LCSD, all outside the laboratory specified acceptance criteria. Since benzyl chloride was

not detected in the associated samples, no qualifications were applied to the benzyl chloride results. However, the detected values of Freon 12 in the associated samples were J qualified as estimated.

In batch WG734285 in laboratory report L712227, the recoveries of 1,4-dioxane (164%/150%) and the RPD of propene (propylene) in the LCS/LCSD pair were high and outside the laboratory specified acceptance criteria. Since 1,4-dioxane was not detected in the associated samples; no qualifications were applied to the 1,4-dioxane results. However, the detected concentrations of propene in the associated samples were J qualified as estimated.

Sample ID	Compound	Laboratory Result (µg/m ³)	Laboratory Flag	Validation Result (µg/m ³)	Validation Qualifier*	Reason Code**
DUP#2-071014	Freon 12	3.3	J4	3.3	J	5
VW-17D-42.5-071014-24HR	Freon 12	2.2	J4	2.2	J	5
VW-17D-75-071614-168HR	Freon 12	4.6	J4	4.6	J	5
VW-17D-42.5-071614-168HR	Freon 12	5.9	J4	5.9	J	5
VW-17D-95.5-072314-REBOUND	Propylene	2.1	J3	2.1	J	5
VW-17D-75-072314-REBOUND	Propylene	3.1	J3	3.1	J	5
VW-17D-072114-200HR	Propylene	2.9	J3	2.9	J	5

µg/m³-microgram per cubic meter

J3- laboratory flag defined as the associated batch QC was outside the established quality control range for precision

J4-laboratory flag defined as the associated batch QC was outside the established quality control range for accuracy

*Validation qualifiers are defined in Attachment 1 at the end of this report

** Reason codes are defined in Attachment 2 at the end of this report

1.5 Surrogates

Acceptable surrogate recoveries were reported for the sample analyses.

1.6 Trip Blank

One trip blank, MW17DS-072114-200HR, was shipped with the sample set. VOCs were not detected in the trip blank above the RDLs, with the following exceptions. The compounds listed below were detected above the RDLs and were qualified in the associated samples as follows.

Compound	Trip Blank Result (µg/kg)
1,2,4-Trimethylbenzene	7.4
1,3,5-Trimethylbenzene	2.4

Compound	Trip Blank Result (µg/kg)
Acetone	26
Chloromethane	1.8

Compound	Trip Blank Result (µg/kg)
Ethanol	25
Freon 12	2.1
Hexane	53

Compound	Trip Blank Result (µg/kg)
Methylene Chloride (DCM)	42
Toluene	5.3

Hexane, methylene chloride, and toluene were detected above the RDLs and less than the trip blank concentrations in the field blank, VW-17D-072114-200HR. Therefore, these compounds were U qualified as not detected in the field blank at the trip blank concentrations. Acetone, chloromethane, ethanol, and Freon 12 were detected in the field blank greater than the trip blank concentrations but less than five times the trip blank concentration. Therefore, these compounds were J qualified as estimated based on professional and technical judgment.

For the remaining associated samples, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, hexane, methylene chloride, and toluene were qualified as follows. Results greater than the RDLs and less than the trip blank concentrations were U qualified as not detected at the trip blank concentrations. Results greater than the trip blank concentrations but less than or equal to five times the trip blank concentrations were J qualified as estimated based on professional judgment. No qualifications were applied to the nondetect results. No qualifications were applied to the results greater than five times the trip blank concentrations, based on professional judgment.

Since the field blank results were greater than the trip blank results for acetone, chloromethane, ethanol, and Freon 12; these compounds were qualified based on the field blank results (see Section 1.7 below) in the associated samples and not based on the trip blank results.

See Attachment 3 below for qualifications.

1.7 Field Blank

One field blank, VW-17D-072114-200HR, was collected with the sample set. VOCs were not detected in the field blank above the RDLs, with the following exceptions. The compounds listed below were detected in the field blank above the RDLs and were qualified in the associated samples as follows.

Compound	Field Blank Result (µg/kg)
Acetone	40
Chloromethane	5.8

Compound	Field Blank Result (µg/kg)
Ethanol	53
Freon 12	2.3

Compound	Field Blank Result (µg/kg)
Hexane	4.9
Methylene Chloride (DCM)	2.6

Compound	Field Blank Result (µg/kg)
Toluene	3.3

Qualifications were applied to acetone, chloroform chloromethane, ethanol, Freon 12, propylene, and tetrahydrofuran as follows. Results greater than the RDLs and less than the field blank concentrations were U qualified as not detected at the field blank concentrations. Results greater than the field blank concentrations but less than or equal to five times the field blank concentrations were J qualified as estimated based on professional judgment. No qualifications were applied to the nondetect results. No qualifications were applied to the results greater than five times the field blank concentrations, based on professional judgment.

Since the hexane, methylene chloride, and toluene results in the field blank were U qualified based on the trip blank results (see Section 1.6 above), no additional qualifications were applied to the hexane, methylene chloride, and toluene data.

See Attachment 3 below for qualifications.

1.8 Field Duplicate

Two field duplicates, DUP#1 070814 and DUP#2-071014, were analyzed with the data sets. It was noted that the COC indicated the field duplicates and original samples were not collected at the same time (1315/1325 and 1605/1610); this should be taken in consideration when assessing the qualified results below. Acceptable precision (RPD \leq 30%) was demonstrated between the field duplicates and the original samples, VW-17D-92.5-070814-4HR and VW-17D-75-071014-24HR, respectively, with the following exceptions.

For compounds with a RPD >30% the concentrations in the field duplicate pair were J qualified as estimated.

For compounds with one detected result and one nondetect result in the field duplicate pair, the detected concentrations were J qualified as estimated and the nondetect values were UJ qualified as estimated less than the RDLs, with the following exceptions. No qualifications were applied if the detected result was less than the RDL of the corresponding result in the field duplicate pair. No qualifications were applied if the detected result was U qualified based on the field blank or trip blank contamination resulting in two nondetect validation results.

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	RPD	Validation Result (µg/m3)	Validation Qualifier	Reason Code
VW-17D-92.5-070814-4HR	Acetone	29	NA	57	40	UJ	7
DUP#1 070814	Acetone	52	NA		52	J	7
VW-17D-92.5-070814-4HR	Chloroform	4.4	NA	NC	4.4	J	7
DUP#1 070814	Chloroform	1.9	U		1.9	UJ	7
VW-17D-92.5-070814-4HR	Chloromethane ¹	1.7	U	NC	NA	NA	NA
DUP#1 070814	Chloromethane ¹	1.4	NA		NA	NA	NA
VW-17D-92.5-070814-4HR	1,1-Dichloroethene	11	NA	NC	11	J	7
DUP#1 070814	1,1-Dichloroethene	1.6	U		1.6	UJ	7
VW-17D-92.5-070814-4HR	cis-1,2-Dichloroethene	370	NA	NC	370	J	7
DUP#1 070814	cis-1,2-Dichloroethene	1.6	U		1.6	UJ	7
VW-17D-92.5-070814-4HR	trans-1,2-Dichloroethene	10	NA	NC	10	J	7
DUP#1 070814	trans-1,2-Dichloroethene	1.6	U		1.6	UJ	7
VW-17D-92.5-070814-4HR	Ethanol ¹	12	NA	80	NA	NA	NA
DUP#1 070814	Ethanol ¹	28	NA		NA	NA	NA
VW-17D-92.5-070814-4HR	Ethylbenzene	16	NA	154	16	J	7
DUP#1 070814	Ethylbenzene	2.1	NA		2.1	J	7
VW-17D-92.5-070814-4HR	Freon 11	9.6	NA	NC	9.6	J	7
DUP#1 070814	Freon 11	2.2	U		2.2	UJ	7
VW-17D-92.5-070814-4HR	Freon 12	4.2	NA	43	4.2	J	7
DUP#1 070814	Freon 12	2.7	NA		2.7	J	7
VW-17D-92.5-070814-4HR	Methyl ethyl ketone ²	15	U	NC	NA	NA	NA
DUP#1 070814	Methyl ethyl ketone ²	9.7	NA		NA	NA	NA
VW-17D-92.5-070814-4HR	Propylene	2.9	NA	52	2.9	J	7
DUP#1 070814	Propylene	1.7	NA		2.9	UJ	7
VW-17D-92.5-070814-4HR	Tetrachloroethene (PCE)	810	NA	NC	810	J	7
DUP#1 070814	Tetrachloroethene (PCE)	2.7	U		2.7	UJ	7
VW-17D-92.5-070814-4HR	Toluene	5.7	NA	56	5.7	J	7
DUP#1 070814	Toluene	3.2	NA		5.3	UJ	7
VW-17D-92.5-070814-4HR	Trichloroethene (TCE)	5900	NA	199	5900	J	7
DUP#1 070814	Trichloroethene (TCE)	8.0	NA		8.0	J	7
VW-17D-92.5-070814-4HR	m&p-Xylenes	170	NA	154	170	J	7
DUP#1 070814	m&p-Xylenes	22	NA		22	J	7
VW-17D-92.5-	o-Xylene	30	NA	155	30	J	7

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	RPD	Validation Result (µg/m3)	Validation Qualifier	Reason Code
070814-4HR							
DUP#1 070814	o-Xylene	3.8	NA		3.8	J	7
VW-17D-92.5-070814-4HR	The other VOCs	ND	NA	0	NA	NA	NA
DUP#1 070814	The other VOCs	ND	NA		NA	NA	NA
VW-17D-75-071014-24HR	Acetone	29	NA	40	UJ	7	
DUP#2-071014	Acetone	48	NA	48	J	7	
VW-17D-75-071014-24HR	Chloroform ²	7.8	U	NC	NA	NA	NA
DUP#2-071014	Chloroform ²	3.4	NA		NA	NA	NA
VW-17D-75-071014-24HR	Cyclohexane	59	NA	NC	59	J	7
DUP#2-071014	Cyclohexane	1.4	U		1.4	UJ	7
VW-17D-75-071014-24HR	1,1-Dichloroethene	14	NA	33	14	J	7
DUP#2-071014	1,1-Dichloroethene	10	NA		10	J	7
VW-17D-75-071014-24HR	cis-1,2-Dichloroethene	480	NA	53	480	J	7
DUP#2-071014	cis-1,2-Dichloroethene	280	NA		280	J	7
VW-17D-75-071014-24HR	trans-1,2-Dichloroethene	15	NA	22	NA	NA	NA
DUP#2-071014	trans-1,2-Dichloroethene	12	NA		NA	NA	NA
VW-17D-75-071014-24HR	Ethanol ¹	17	NA	NC	NA	NA	NA
DUP#2-071014	Ethanol ¹	11	NA		NA	NA	NA
VW-17D-75-071014-24HR	1-Ethyl-4-methylbenzene	64	NA	NC	64	J	7
DUP#2-071014	1-Ethyl-4-methylbenzene	2.0	U		2.0	UJ	7
VW-17D-75-071014-24HR	Freon 11	18	NA	32	18	J	7
DUP#2-071014	Freon 11	13	NA		13	J	7
VW-17D-75-071014-24HR	Freon 12 ²	7.9	U	NC	NA	NA	NA
DUP#2-071014	Freon 12 ²	3.3	J4		NA	NA	NA
VW-17D-75-071014-24HR	Heptane	26	NA	NC	26	J	7
DUP#2-071014	Heptane	1.6	U		1.6	UJ	7
VW-17D-75-071014-24HR	Hexane	260	NA	NC	260	J	7
DUP#2-071014	Hexane	1.4	U		1.4	UJ	7
VW-17D-75-071014-24HR	Isopropylbenzene ²	7.9	U	NC	NA	NA	NA
DUP#2-071014	Isopropylbenzene ²	2.3	NA		NA	NA	NA
VW-17D-75-071014-24HR	Methylene Chloride (DCM) ¹	5.6	U	NC	NA	NA	NA
DUP#2-071014	Methylene Chloride (DCM) ¹	18	NA		NA	NA	NA
VW-17D-75-	Methyl ethyl ketone ²	29	U	NC	NA	NA	NA

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	RPD	Validation Result (µg/m3)	Validation Qualifier	Reason Code
071014-24HR							
DUP#2-071014	Methyl ethyl ketone ²	8.3	NA		NA	NA	NA
VW-17D-75-071014-24HR	Propylene ²	5.5	U	NC	NA	NA	NA
DUP#2-071014	Propylene ²	1.6	NA		NA	NA	NA
VW-17D-75-071014-24HR	Tetrachloroethene (PCE)	1100	NA	38	1100	J	7
DUP#2-071014	Tetrachloroethene (PCE)	750	NA		750	J	7
VW-17D-75-071014-24HR	Toluene	17	NA	147	17	J	7
DUP#2-071014	Toluene	2.6	NA		5.3	UJ	7
VW-17D-75-071014-24HR	1,1,1-Trichloroethane ²	8.7	U	NC	NA	NA	NA
DUP#2-071014	1,1,1-Trichloroethane ²	3.9	NA		NA	NA	NA
VW-17D-75-071014-24HR	Trichloroethene (TCE)	8000	NA	7	NA	NA	NA
DUP#2-071014	Trichloroethene (TCE)	8600	NA		NA	NA	NA
VW-17D-75-071014-24HR	1,2,4-Trimethylbenzene	390	NA	NC	390	J	7
DUP#2-071014	1,2,4-Trimethylbenzene	2.0	U		2.0	UJ	7
VW-17D-75-071014-24HR	1,3,5-Trimethylbenzene	240	NA	NC	240	J	7
DUP#2-071014	1,3,5-Trimethylbenzene	2.0	U		2.0	UJ	7
VW-17D-75-071014-24HR	m&p-Xylenes	160	NA	NC	160	J	7
DUP#2-071014	m&p-Xylenes	3.5	U		3.5	UJ	7
VW-17D-75-071014-24HR	o-Xylene	17	NA	NC	17	J	7
DUP#2-071014	o-Xylene	1.73	U		1.73	UJ	7
VW-17D-75-071014-24HR	The other VOCs	ND	NA	0	NA	NA	NA
DUP#2-071014	The other VOCs	ND	NA		NA	NA	NA

µg/m³-micrograms per cubic meter

NA-not applicable

NC-not calculable

U-not detected at or above the RDL

¹-the detected value was U qualified based on field blank or trip blank contamination, therefore, no additional qualifications were applied

²-compound was detected in one sample in the field duplicate pair but was less than reported RDL in the other sample in the field duplicate pair

1.9 Sensitivity

The sample results were reported to the RDLs. No elevated non-detect values were reported.

1.10 Electronic Data Deliverables (EDD) Review

Results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits and RPD outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

**ATTACHMENT 3
 QUALIFICATION DUE TO TRIP BLANK AND FIELD BLANK**

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	Validation Result (µg/m3)	Validation Qualifier	Reason Code
D-17DS-070714-0HR	Ethanol	25	NA	53	U	3
D-17DS-070714-4HR	1,2,4-Trimethylbenzene	2.0	NA	7.4	U	3
D-17DS-070714-4HR	Acetone	43	NA	43	J	3
D-17DS-070714-4HR	Chloromethane	1.3	NA	5.8	U	3
D-17DS-070714-4HR	Ethanol	45	NA	53	U	3
D-17DS-070714-4HR	Freon 12	3.0	NA	3.0	J	3
D-17DS-070714-4HR	Methylene Chloride (DCM)	1.6	NA	42	U	3
D-17DS-070714-4HR	Toluene	11	NA	11	J	3
VW-17D-92.5-070814-0HR	1,2,4-Trimethylbenzene	4.1	NA	7.4	U	3
VW-17D-92.5-070814-0HR	Propylene	6.9	NA	6.9	J	3
VW-17D-92.5-070814-0HR	Toluene	25	NA	25	J	3
VW-17D-92.5-070814-4HR	Acetone	29	NA	40	U	3
VW-17D-92.5-070814-4HR	Chloroform	4.4	NA	4.4	J	3
VW-17D-92.5-070814-4HR	Ethanol	12	NA	53	U	3
VW-17D-92.5-070814-4HR	Freon 12	4.2	NA	4.2	J	3
VW-17D-92.5-070814-4HR	Propylene	2.9	NA	2.9	J	3
VW-17D-92.5-070814-4HR	Toluene	5.7	NA	5.7	J	3
DUP#1 070814	Acetone	52	NA	52	J	3
DUP#1 070814	Chloromethane	1.4	NA	5.8	U	3
DUP#1 070814	Ethanol	28	NA	53	U	3
DUP#1 070814	Freon 12	2.7	NA	2.7	J	3
DUP#1 070814	Propylene	1.7	NA	2.9	U	3
DUP#1 070814	Toluene	3.2	NA	5.3	U	3
VW-17D-75-070814-0HR	Acetone	50	NA	50	J	3
VW-17D-75-070814-0HR	Chloromethane	1.3	NA	5.8	U	3
VW-17D-75-070814-0HR	Ethanol	21	NA	53	U	3
VW-17D-75-070814-0HR	Freon 12	3.1	NA	3.1	J	3
VW-17D-75-070814-0HR	Toluene	4.1	NA	5.3	U	3
VW-17D-750-070814-4HR	1,2,4-Trimethylbenzene	4.3	NA	7.4	U	3
VW-17D-750-070814-4HR	Ethanol	110	NA	110	J	3
VW-17D-750-070814-4HR	Freon 12	4.6	NA	4.6	J	3
VW-17D-750-070814-4HR	Hexane	3.5	NA	53	U	3

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	Validation Result (µg/m3)	Validation Qualifier	Reason Code
VW-17D-42.5-070914-0HR	Acetone	33	NA	40	U	3
VW-17D-42.5-070914-0HR	Chloroform	10	NA	10	J	3
VW-17D-42.5-070914-0HR	Chloromethane	1.2	NA	5.8	U	3
VW-17D-42.5-070914-0HR	Ethanol	15	NA	53	U	3
VW-17D-42.5-070914-0HR	Toluene	7.9	NA	7.9	J	3
VW-17D-42.5-070914-4HR	Acetone	93	NA	93	J	3
VW-17D-42.5-070914-4HR	Chloroform	12	NA	12	J	3
VW-17D-42.5-070914-4HR	Ethanol	36	NA	53	U	3
VW-17D-42.5-070914-4HR	Freon 12	2.6	NA	2.6	J	3
VW-17D-42.5-070914-4HR	Toluene	9.4	NA	9.4	J	3
MW-17DS-070914-0HR	Acetone	93	NA	93	J	3
MW-17DS-070914-0HR	Chloroform	9.7	NA	9.7	J	3
MW-17DS-070914-0HR	Chloromethane	1.2	NA	5.8	U	3
MW-17DS-070914-0HR	Ethanol	130	NA	130	J	3
MW-17DS-070914-0HR	Freon 12	2.8	NA	2.8	J	3
MW-17DS-070914-0HR	Hexane	6.0	NA	53	U	3
MW-17DS-070914-0HR	Methylene Chloride (DCM)	5.6	NA	42	U	3
MW-17DS-070914-0HR	Tetrahydrofuran	6.5	NA	7.4	U	3
MW-17DS-070914-4HR	Acetone	18	NA	40	U	3
MW-17DS-070914-4HR	Chloroform	4.8	NA	4.8	J	3
MW-17DS-070914-4HR	Ethanol	6.8	NA	53	U	3
MW-17DS-070914-4HR	Hexane	1.8	NA	53	U	3
MW-17DS-070914-4HR	Toluene	2.4	NA	5.3	U	3
MW-17DS-071014-24HR	Acetone	38	NA	40	U	3
MW-17DS-071014-24HR	Chloroform	9.2	NA	9.2	J	3
MW-17DS-071014-24HR	Ethanol	17	NA	53	U	3
MW-17DS-071014-24HR	Hexane	11	NA	53	U	3
MW-17DS-071014-24HR	Toluene	3.4	NA	5.3	U	3
VW-17D-95.5-071014-24HR	Acetone	29	NA	40	U	3
VW-17D-95.5-071014-24HR	Chloroform	5.8	NA	5.8	J	3
VW-17D-95.5-071014-24HR	Ethanol	7.9	NA	53	U	3
VW-17D-95.5-071014-24HR	Hexane	18	NA	53	U	3
VW-17D-95.5-071014-24HR	Toluene	3.5	NA	5.3	U	3

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	Validation Result (µg/m3)	Validation Qualifier	Reason Code
VW-17D-75-071014-24HR	Acetone	29	NA	40	U	3
VW-17D-75-071014-24HR	Ethanol	17	NA	53	U	3
VW-17D-75-071014-24HR	Hexane	260	NA	260	J	3
VW-17D-75-071014-24HR	Toluene	17	NA	17	J	3
DUP#2-071014	Acetone	48	NA	48	J	3
DUP#2-071014	Chloroform	3.4	NA	3.4	J	3
DUP#2-071014	Ethanol	11	NA	53	U	3
DUP#2-071014	Freon 12	3.3	J4	3.3	J	3
DUP#2-071014	Methylene Chloride (DCM)	18	NA	42	U	3
DUP#2-071014	Propylene	1.6	NA	2.9	U	3
DUP#2-071014	Toluene	2.6	NA	5.3	U	3
VW-17D-42.5-071014-24HR	Acetone	43	NA	43	J	3
VW-17D-42.5-071014-24HR	Chloroform	8.3	NA	8.3	J	3
VW-17D-42.5-071014-24HR	Ethanol	21	NA	53	U	3
VW-17D-42.5-071014-24HR	Freon 12	2.2	J4	2.2	J	3
VW-17D-42.5-071014-24HR	Propylene	2.9	NA	2.9	J	3
VW-17D-42.5-071014-24HR	Toluene	2.2	NA	5.3	U	3
VW-17D-75-071214-72HR	Ethanol	11	NA	53	U	3
VW-17D-42.4-071214-72HR	Acetone	38	NA	40	U	3
VW-17D-42.4-071214-72HR	Chloroform	4.1	NA	4.1	J	3
VW-17D-42.4-071214-72HR	Chloromethane	1.5	NA	5.8	U	3
VW-17D-42.4-071214-72HR	Ethanol	14	NA	53	U	3
VW-17D-42.4-071214-72HR	Freon 12	3.0	NA	3.0	J	3
VW-17D-42.4-071214-72HR	Hexane	8.8	NA	53	U	3
VW-17D-42.4-071214-72HR	Methylene Chloride (DCM)	1.9	NA	42	U	3
VW-17D-42.4-071214-72HR	Toluene	2.4	NA	5.3	U	3
VW-17D-95.5-071214-72HR	Acetone	71	NA	71	J	3
VW-17D-95.5-071214-72HR	Ethanol	15	NA	53	U	3
MW17DS-071214-72HR	Acetone	130	NA	130	J	3

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	Validation Result (µg/m3)	Validation Qualifier	Reason Code
MW17DS-071214-72HR	Chloroform	6.3	NA	6.3	J	3
MW17DS-071214-72HR	Chloromethane	3.3	NA	5.8	U	3
MW17DS-071214-72HR	Ethanol	12	NA	53	U	3
MW17DS-071214-72HR	Toluene	12	NA	12	J	3
MW-17DS-071614-168HR	Acetone	50	NA	50	J	3
MW-17DS-071614-168HR	Chloroform	3.1	NA	3.1	J	3
MW-17DS-071614-168HR	Ethanol	18	NA	53	U	3
MW-17DS-071614-168HR	Freon 12	2.9	NA	2.9	J	3
MW-17DS-071614-168HR	Hexane	8.5	NA	53	U	3
MW-17DS-071614-168HR	Methylene Chloride (DCM)	2.7	NA	42	U	3
MW-17DS-071614-168HR	Propylene	1.4	NA	2.9	U	3
MW-17DS-071614-168HR	Toluene	3.6	NA	5.3	U	3
VW-17D-95.5-071614-168HR	Acetone	43	NA	43	J	3
VW-17D-95.5-071614-168HR	Chloroform	9.7	NA	9.7	J	3
VW-17D-95.5-071614-168HR	Ethanol	11	NA	53	U	3
VW-17D-75-071614-168HR	Acetone	33	NA	40	U	3
VW-17D-75-071614-168HR	Chloroform	9.7	NA	9.7	J	3
VW-17D-75-071614-168HR	Ethanol	58	NA	58	J	3
VW-17D-75-071614-168HR	Freon 12	4.6	J4	4.6	J	3
VW-17D-42.5-071614-168HR	Acetone	62	NA	62	J	3
VW-17D-42.5-071614-168HR	Chloroform	7.8	NA	7.8	J	3
VW-17D-42.5-071614-168HR	Ethanol	9.2	NA	53	U	3
VW-17D-42.5-071614-168HR	Freon 12	5.9	J4	5.9	J	3
VW-17D-42.5-071614-168HR	Toluene	4.5	NA	5.3	U	3
VW-17D-072114-200HR	Acetone	40	NA	40	J	3
VW-17D-072114-200HR	Chloromethane	5.8	NA	5.8	J	3
VW-17D-072114-200HR	Ethanol	53	NA	53	J	3
VW-17D-072114-200HR	Freon 12	2.3	NA	2.3	J	3
VW-17D-072114-200HR	Hexane	4.9	NA	53	U	3
VW-17D-072114-200HR	Methylene Chloride (DCM)	2.6	NA	42	U	3
VW-17D-072114-200HR	Toluene	3.3	NA	5.3	U	3

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	Validation Result (µg/m3)	Validation Qualifier	Reason Code
VW-17D-95.5-072314-REBOUND	Acetone	48	NA	48	J	3
VW-17D-95.5-072314-REBOUND	Chloroform	7.8	NA	7.8	J	3
VW-17D-95.5-072314-REBOUND	Ethanol	21	NA	53	U	3
VW-17D-95.5-072314-REBOUND	Freon 12	4.6	NA	4.6	J	3
VW-17D-95.5-072314-REBOUND	Hexane	9.2	NA	53	U	3
VW-17D-95.5-072314-REBOUND	Methylene Chloride (DCM)	4.2	NA	42	U	3
VW-17D-95.5-072314-REBOUND	Propylene	2.1	J3	2.9	U	3
VW-17D-95.5-072314-REBOUND	Toluene	1.8	NA	5.3	U	3
VW-17D-95.5-072314-REBOUND	1,2,4-Trimethylbenzene	2.7	NA	7.4	U	3
VW-17D-75-072314-REBOUND	Acetone	74	NA	74	J	3
VW-17D-75-072314-REBOUND	Chloroform	11	NA	11	J	3
VW-17D-75-072314-REBOUND	Ethanol	30	NA	53	U	3
VW-17D-75-072314-REBOUND	Freon 12	5.4	NA	5.4	J	3
VW-17D-75-072314-REBOUND	Propylene	3.1	J3	3.1	J	3
VW-17D-42.4-072314-REBOUND	Acetone	36	NA	40	U	3
VW-17D-42.4-072314-REBOUND	Chloroform	8.3	NA	8.3	J	3
VW-17D-42.4-072314-REBOUND	Ethanol	17	NA	53	U	3
VW-17D-42.4-072314-REBOUND	Freon 12	4.9	NA	4.9	J	3
VW-17D-42.4-072314-REBOUND	Hexane	11	NA	53	U	3
VW-17D-42.4-072314-REBOUND	Methylene Chloride (DCM)	3.4	NA	42	U	3
VW-17D-42.4-072314-REBOUND	Propylene	1.5	NA	2.9	U	3
VW-17D-42.4-072314-REBOUND	Toluene	2.3	NA	5.3	U	3
VW-17D-42.4-072314-REBOUND	1,2,4-Trimethylbenzene	2.4	NA	7.4	U	3
MW-17DS-072314-REBOUND	Acetone	130	NA	130	J	3
MW-17DS-072314-REBOUND	Chloromethane	2.3	NA	5.8	U	3
MW-17DS-072314-	Ethanol	43	NA	53	U	3

Sample ID	Compound	Laboratory Result (µg/m3)	Laboratory Flag	Validation Result (µg/m3)	Validation Qualifier	Reason Code
REBOUND						
MW-17DS-072314-REBOUND	Freon 12	3.9	NA	3.9	J	3
MW-17DS-072314-REBOUND	Hexane	9.5	NA	53	U	3
MW-17DS-072314-REBOUND	Methylene Chloride (DCM)	3.3	NA	42	U	3
MW-17DS-072314-REBOUND	Propylene	4.1	NA	4.1	J	3
MW-17DS-072314-REBOUND	Toluene	17	NA	17	J	3
MW-17DS-072314-REBOUND	1,2,4-Trimethylbenzene	26	NA	26	J	3
MW-17DS-072314-REBOUND	1,3,5-Trimethylbenzene	6.4	NA	6.4	J	3

µg/m³-microgram per cubic meter

NA-not applicable

J3- laboratory flag defined as the associated batch QC was outside the established quality control range for precision

J4-laboratory flag defined as the associated batch QC was outside the established quality control range for accuracy



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Jason Flowers
Geosyntec- Seattle, WA
1201 3rd Ave, Suite #330
Seattle, WA 98101

Report Summary

Monday July 21, 2014

Report Number: L709812


Samples Received: 07/12/14

Client Project: PNG0564S14-02

Description: Cascade Air Project

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

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 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-01

Sample ID : D-17DS-070714-0HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/07/14 12:02

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	25.0	59.0	< 25.	< 59.	TO-15	07/18/14	20
Allyl chloride	107-05-1	76.53	4.00	13.0	< 4.0	< 13.	TO-15	07/18/14	20
Benzene	71-43-2	78.1	4.00	13.0	< 4.0	< 13.	TO-15	07/18/14	20
Benzyl Chloride	100-44-7	127	4.00	21.0	< 4.0	< 21.	TO-15	07/18/14	20
Bromodichloromethane	75-27-4	164	4.00	27.0	< 4.0	< 27.	TO-15	07/18/14	20
Bromoform	75-25-2	253	12.0	120.	< 12.	< 120	TO-15	07/18/14	20
Bromomethane	74-83-9	94.9	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
1,3-Butadiene	106-99-0	54.1	40.0	89.0	< 40.	< 89.	TO-15	07/18/14	20
Carbon disulfide	75-15-0	76.1	4.00	12.0	< 4.0	< 12.	TO-15	07/18/14	20
Carbon tetrachloride	56-23-5	154	4.00	25.0	< 4.0	< 25.	TO-15	07/18/14	20
Chlorobenzene	108-90-7	113	4.00	18.0	< 4.0	< 18.	TO-15	07/18/14	20
Chloroethane	75-00-3	64.5	4.00	11.0	< 4.0	< 11.	TO-15	07/18/14	20
Chloroform	67-66-3	119	4.00	19.0	< 4.0	< 19.	TO-15	07/18/14	20
Chloromethane	74-87-3	50.5	4.00	8.30	< 4.0	< 8.3	TO-15	07/18/14	20
2-Chlorotoluene	95-49-8	126	4.00	21.0	< 4.0	< 21.	TO-15	07/18/14	20
Cyclohexane	110-82-7	84.2	4.00	14.0	< 4.0	< 14.	TO-15	07/18/14	20
Dibromochloromethane	124-48-1	208	4.00	34.0	< 4.0	< 34.	TO-15	07/18/14	20
1,2-Dibromoethane	106-93-4	188	4.00	31.0	< 4.0	< 31.	TO-15	07/18/14	20
1,2-Dichlorobenzene	95-50-1	147	4.00	24.0	< 4.0	< 24.	TO-15	07/18/14	20
1,3-Dichlorobenzene	541-73-1	147	4.00	24.0	< 4.0	< 24.	TO-15	07/18/14	20
1,4-Dichlorobenzene	106-46-7	147	4.00	24.0	< 4.0	< 24.	TO-15	07/18/14	20
1,2-Dichloroethane	107-06-2	99	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
1,1-Dichloroethane	75-34-3	98	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
1,1-Dichloroethene	75-35-4	96.9	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
cis-1,2-Dichloroethene	156-59-2	96.9	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
trans-1,2-Dichloroethene	156-60-5	96.9	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
1,2-Dichloropropane	78-87-5	113	4.00	18.0	< 4.0	< 18.	TO-15	07/18/14	20
cis-1,3-Dichloropropene	10061-01-5	111	4.00	18.0	< 4.0	< 18.	TO-15	07/18/14	20
trans-1,3-Dichloropropene	10061-02-6	111	4.00	18.0	< 4.0	< 18.	TO-15	07/18/14	20
1,4-Dioxane	123-91-1	88.1	4.00	14.0	< 4.0	< 14.	TO-15	07/18/14	20
Ethanol	64-17-5	46.1	12.6	24.0	13.	25.	TO-15	07/18/14	20
Ethylbenzene	100-41-4	106	4.00	17.0	290	1300	TO-15	07/18/14	20
4-Ethyltoluene	622-96-8	120	4.00	20.0	< 4.0	< 20.	TO-15	07/18/14	20
Trichlorofluoromethane	75-69-4	137.4	4.00	22.0	< 4.0	< 22.	TO-15	07/18/14	20
Dichlorodifluoromethane	75-71-8	120.92	4.00	20.0	< 4.0	< 20.	TO-15	07/18/14	20
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	4.00	31.0	< 4.0	< 31.	TO-15	07/18/14	20
1,2-Dichlorotetrafluoroethane	76-14-2	171	4.00	28.0	< 4.0	< 28.	TO-15	07/18/14	20
Heptane	142-82-5	100	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
Hexachloro-1,3-butadiene	87-68-3	261	12.6	130.	< 13.	< 130	TO-15	07/18/14	20
n-Hexane	110-54-3	86.2	4.00	14.0	< 4.0	< 14.	TO-15	07/18/14	20
Isopropylbenzene	98-82-8	120.2	4.00	20.0	< 4.0	< 20.	TO-15	07/18/14	20
Methylene Chloride	75-09-2	84.9	4.00	14.0	< 4.0	< 14.	TO-15	07/18/14	20
Methyl Butyl Ketone	591-78-6	100	25.0	100.	< 25.	< 100	TO-15	07/18/14	20

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-01

Sample ID : D-17DS-070714-0HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/07/14 12:02

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	25.0	74.0	< 25.	< 74.	TO-15	07/18/14	20
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	25.0	100.	< 25.	< 100	TO-15	07/18/14	20
Methyl methacrylate	80-62-6	100.12	4.00	16.0	< 4.0	< 16.	TO-15	07/18/14	20
MTBE	1634-04-4	88.1	4.00	14.0	< 4.0	< 14.	TO-15	07/18/14	20
Naphthalene	91-20-3	128	12.6	66.0	< 13.	< 66.	TO-15	07/18/14	20
2-Propanol	67-63-0	60.1	25.0	61.0	< 25.	< 61.	TO-15	07/18/14	20
Propene	115-07-1	42.1	8.00	14.0	< 8.0	< 14.	TO-15	07/18/14	20
Styrene	100-42-5	104	4.00	17.0	< 4.0	< 17.	TO-15	07/18/14	20
1,1,2,2-Tetrachloroethane	79-34-5	168	4.00	27.0	< 4.0	< 27.	TO-15	07/18/14	20
Tetrachloroethylene	127-18-4	166	4.00	27.0	< 4.0	< 27.	TO-15	07/18/14	20
Tetrahydrofuran	109-99-9	72.1	4.00	12.0	< 4.0	< 12.	TO-15	07/18/14	20
Toluene	108-88-3	92.1	4.00	15.0	13.	49.	TO-15	07/18/14	20
1,2,4-Trichlorobenzene	120-82-1	181	12.6	93.0	< 13.	< 93.	TO-15	07/18/14	20
1,1,1-Trichloroethane	71-55-6	133	4.00	22.0	< 4.0	< 22.	TO-15	07/18/14	20
1,1,2-Trichloroethane	79-00-5	133	4.00	22.0	< 4.0	< 22.	TO-15	07/18/14	20
Trichloroethylene	79-01-6	131	4.00	21.0	< 4.0	< 21.	TO-15	07/18/14	20
1,2,4-Trimethylbenzene	95-63-6	120	4.00	20.0	< 4.0	< 20.	TO-15	07/18/14	20
1,3,5-Trimethylbenzene	108-67-8	120	4.00	20.0	< 4.0	< 20.	TO-15	07/18/14	20
2,2,4-Trimethylpentane	540-84-1	114.22	4.00	19.0	< 4.0	< 19.	TO-15	07/18/14	20
Vinyl chloride	75-01-4	62.5	4.00	10.0	< 4.0	< 10.	TO-15	07/18/14	20
Vinyl Bromide	593-60-2	106.95	4.00	17.0	< 4.0	< 17.	TO-15	07/18/14	20
Vinyl acetate	108-05-4	86.1	4.00	14.0	< 4.0	< 14.	TO-15	07/18/14	20
m&p-Xylene	1330-20-7	106	160.	690.	2200	9500	TO-15	07/19/14	400
o-Xylene	95-47-6	106	4.00	17.0	370	1600	TO-15	07/18/14	20
1,4-Bromofluorobenzene	460-00-4				96.9	% Rec.	TO-15	07/18/14	20

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-02

Sample ID : D-17DS-070714-4HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/07/14 15:50

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	18.	43.	TO-15	07/18/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/18/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/18/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/18/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/18/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/18/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/18/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/18/14	2
Chloroform	67-66-3	119	0.400	1.90	< 0.40	< 1.9	TO-15	07/18/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.62	1.3	TO-15	07/18/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/18/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/18/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Ethanol	64-17-5	46.1	1.26	2.40	24.	45.	TO-15	07/18/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	56.	240	TO-15	07/18/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.61	3.0	TO-15	07/18/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/18/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/18/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/18/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	0.74	3.6	TO-15	07/18/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	0.46	1.6	TO-15	07/18/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/18/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-02

Sample ID : D-17DS-070714-4HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/07/14 15:50

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/18/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/18/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/18/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	2.7	6.6	TO-15	07/18/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/18/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/18/14	2
Toluene	108-88-3	92.1	0.400	1.50	2.8	11.	TO-15	07/18/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/18/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
Trichloroethylene	79-01-6	131	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	0.40	2.0	TO-15	07/18/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/18/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/18/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
m&p-Xylene	1330-20-7	106	10.0	43.0	490	2100	TO-15	07/19/14	25
o-Xylene	95-47-6	106	5.00	22.0	76.	330	TO-15	07/19/14	25
1,4-Bromofluorobenzene	460-00-4				94.6	% Rec.	TO-15	07/18/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-92.5-070814-0HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 09:42

ESC Sample # : L709812-03
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	100.	240.	550	1300	TO-15	07/19/14	80
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/18/14	4
Benzene	71-43-2	78.1	0.800	2.60	< 0.80	< 2.6	TO-15	07/18/14	4
Benzyl Chloride	100-44-7	127	0.800	4.20	< 0.80	< 4.2	TO-15	07/18/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/18/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/18/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/18/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/18/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/18/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/18/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/18/14	4
Chloroform	67-66-3	119	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	< 0.80	< 1.7	TO-15	07/18/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/18/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/18/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/18/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/18/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/18/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	1.0	4.0	TO-15	07/18/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	36.	140	TO-15	07/18/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	1.0	4.0	TO-15	07/18/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/18/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/18/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/18/14	4
Ethanol	64-17-5	46.1	2.52	4.80	< 2.5	< 4.8	TO-15	07/18/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	48.	210	TO-15	07/18/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	< 0.80	< 4.5	TO-15	07/18/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	< 0.80	< 4.0	TO-15	07/18/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/18/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/18/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/18/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/18/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Isopropylbenzene	98-82-8	120.2	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/18/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-92.5-070814-0HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 09:42

ESC Sample # : L709812-03
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	12.	35.	TO-15	07/18/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/18/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/18/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/18/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/18/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	20.	49.	TO-15	07/18/14	4
Propene	115-07-1	42.1	1.60	2.80	4.0	6.9	TO-15	07/18/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/18/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/18/14	4
Tetrachloroethylene	127-18-4	166	0.800	5.40	41.	280	TO-15	07/18/14	4
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/18/14	4
Toluene	108-88-3	92.1	0.800	3.00	6.6	25.	TO-15	07/18/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/18/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/18/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/18/14	4
Trichloroethylene	79-01-6	131	16.0	86.0	400	2100	TO-15	07/19/14	80
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	0.84	4.1	TO-15	07/18/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/18/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/18/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
m&p-Xylene	1330-20-7	106	32.0	140.	290	1300	TO-15	07/19/14	80
o-Xylene	95-47-6	106	0.800	3.50	78.	340	TO-15	07/18/14	4
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/18/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-92.5-070814-4HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 13:15

ESC Sample # : L709812-04
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	5.00	12.0	12.	29.	TO-15	07/18/14	4
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/18/14	4
Benzene	71-43-2	78.1	0.800	2.60	< 0.80	< 2.6	TO-15	07/18/14	4
Benzyl Chloride	100-44-7	127	0.800	4.20	< 0.80	< 4.2	TO-15	07/18/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/18/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/18/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/18/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/18/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/18/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/18/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/18/14	4
Chloroform	67-66-3	119	0.800	3.90	0.90	4.4	TO-15	07/18/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	< 0.80	< 1.7	TO-15	07/18/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/18/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/18/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/18/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/18/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/18/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	2.8	11.	TO-15	07/18/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	93.	370	TO-15	07/18/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	2.6	10.	TO-15	07/18/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/18/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/18/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/18/14	4
Ethanol	64-17-5	46.1	2.52	4.80	6.2	12.	TO-15	07/18/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	3.8	16.	TO-15	07/18/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	1.7	9.6	TO-15	07/18/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	0.85	4.2	TO-15	07/18/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/18/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/18/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/18/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/18/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Isopropylbenzene	98-82-8	120.2	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/18/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 (615) 758-5858
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 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-92.5-070814-4HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 13:15

ESC Sample # : L709812-04
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	< 5.0	< 15.	TO-15	07/18/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/18/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/18/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/18/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/18/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	< 5.0	< 12.	TO-15	07/18/14	4
Propene	115-07-1	42.1	1.60	2.80	1.7	2.9	TO-15	07/18/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/18/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/18/14	4
Tetrachloroethylene	127-18-4	166	0.800	5.40	120	810	TO-15	07/18/14	4
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/18/14	4
Toluene	108-88-3	92.1	0.800	3.00	1.5	5.7	TO-15	07/18/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/18/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/18/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/18/14	4
Trichloroethylene	79-01-6	131	80.0	430.	1100	5900	TO-15	07/19/14	400
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/18/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/18/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
m&p-Xylene	1330-20-7	106	1.60	6.90	40.	170	TO-15	07/18/14	4
o-Xylene	95-47-6	106	0.800	3.50	7.0	30.	TO-15	07/18/14	4
1,4-Bromofluorobenzene	460-00-4				104	% Rec.	TO-15	07/18/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 (615) 758-5858
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-05

Sample ID : DUP#1 070814

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/08/14 13:25

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	22.	52.	TO-15	07/18/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/18/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/18/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/18/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/18/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/18/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/18/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/18/14	2
Chloroform	67-66-3	119	0.400	1.90	< 0.40	< 1.9	TO-15	07/18/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.69	1.4	TO-15	07/18/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/18/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/18/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Ethanol	64-17-5	46.1	1.26	2.40	15.	28.	TO-15	07/18/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	0.49	2.1	TO-15	07/18/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.55	2.7	TO-15	07/18/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/18/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/18/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/18/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/18/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-05

Sample ID : DUP#1 070814

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/08/14 13:25

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	3.3	9.7	TO-15	07/18/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/18/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/18/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/18/14	2
Propene	115-07-1	42.1	0.800	1.40	1.0	1.7	TO-15	07/18/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/18/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.85	3.2	TO-15	07/18/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/18/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
Trichloroethylene	79-01-6	131	0.400	2.10	1.5	8.0	TO-15	07/19/14	2
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/18/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/18/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	5.0	22.	TO-15	07/19/14	2
o-Xylene	95-47-6	106	0.400	1.70	0.87	3.8	TO-15	07/18/14	2
1,4-Bromofluorobenzene	460-00-4				102	% Rec.	TO-15	07/18/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-070814-0HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 14:00

ESC Sample # : L709812-06
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	21.	50.	TO-15	07/18/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/18/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/18/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/18/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/18/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/18/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/18/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/18/14	2
Chloroform	67-66-3	119	0.400	1.90	< 0.40	< 1.9	TO-15	07/18/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.62	1.3	TO-15	07/18/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/18/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/18/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/18/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/18/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Ethanol	64-17-5	46.1	1.26	2.40	11.	21.	TO-15	07/18/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.62	3.1	TO-15	07/18/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/18/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/18/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/18/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/18/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-070814-0HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 14:00

ESC Sample # : L709812-06
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/18/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/18/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/18/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/18/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/18/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/18/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	< 0.40	< 2.7	TO-15	07/18/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/18/14	2
Toluene	108-88-3	92.1	0.400	1.50	1.1	4.1	TO-15	07/18/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/18/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/18/14	2
Trichloroethylene	79-01-6	131	0.400	2.10	< 0.40	< 2.1	TO-15	07/18/14	2
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/18/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/18/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/18/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/18/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/18/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/18/14	2
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/18/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Mt. Juliet, TN 37122
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 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-750-070814-4HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 18:00

ESC Sample # : L709812-07

Site ID :

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	5.00	12.0	84.	200	TO-15	07/18/14	4
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/18/14	4
Benzene	71-43-2	78.1	0.800	2.60	1.1	3.5	TO-15	07/18/14	4
Benzyl Chloride	100-44-7	127	0.800	4.20	< 0.80	< 4.2	TO-15	07/18/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/18/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/18/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/18/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/18/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/18/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/18/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/18/14	4
Chloroform	67-66-3	119	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	< 0.80	< 1.7	TO-15	07/18/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/18/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/18/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/18/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/18/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/18/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/18/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	2.3	9.1	TO-15	07/18/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	65.	260	TO-15	07/18/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	2.1	8.3	TO-15	07/18/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/18/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/18/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/18/14	4
Ethanol	64-17-5	46.1	2.52	4.80	58.	110	TO-15	07/18/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/18/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	1.7	9.6	TO-15	07/18/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	0.94	4.6	TO-15	07/18/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/18/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/18/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/18/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/18/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	0.99	3.5	TO-15	07/18/14	4
Isopropylbenzene	98-82-8	120.2	0.800	3.90	4.3	21.	TO-15	07/18/14	4
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/18/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-750-070814-4HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 18:00

ESC Sample # : L709812-07
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	9.8	29.	TO-15	07/18/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/18/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/18/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/18/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/18/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	5.1	13.	TO-15	07/18/14	4
Propene	115-07-1	42.1	1.60	2.80	< 1.6	< 2.8	TO-15	07/18/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/18/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/18/14	4
Tetrachloroethylene	127-18-4	166	0.800	5.40	99.	670	TO-15	07/18/14	4
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/18/14	4
Toluene	108-88-3	92.1	0.800	3.00	16.	60.	TO-15	07/18/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/18/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/18/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/18/14	4
Trichloroethylene	79-01-6	131	80.0	430.	1100	5900	TO-15	07/19/14	400
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	0.87	4.3	TO-15	07/18/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/18/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/18/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/18/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/18/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/18/14	4
m&p-Xylene	1330-20-7	106	1.60	6.90	2.2	9.5	TO-15	07/18/14	4
o-Xylene	95-47-6	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/18/14	4
1,4-Bromofluorobenzene	460-00-4				103	% Rec.	TO-15	07/18/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-08

Sample ID : VW-17D-42.5-070914-0HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/08/14 07:21

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	14.	33.	TO-15	07/19/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/19/14	2
Benzene	71-43-2	78.1	0.400	1.30	8.4	27.	TO-15	07/19/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/19/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/19/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/19/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/19/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/19/14	2
Chloroform	67-66-3	119	0.400	1.90	2.1	10.	TO-15	07/19/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.58	1.2	TO-15	07/19/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/19/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	78.	310	TO-15	07/19/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Ethanol	64-17-5	46.1	1.26	2.40	8.2	15.	TO-15	07/19/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/19/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/19/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	3.7	18.	TO-15	07/19/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-070914-0HR
 Collected By : Jason Flowers
 Collection Date : 07/08/14 07:21

ESC Sample # : L709812-08
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	2.8	8.3	TO-15	07/19/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/19/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/19/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/19/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	18.	120	TO-15	07/19/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/19/14	2
Toluene	108-88-3	92.1	0.400	1.50	2.1	7.9	TO-15	07/19/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/19/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Trichloroethylene	79-01-6	131	32.0	170.	200	1100	TO-15	07/19/14	160
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/19/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/19/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,4-Bromofluorobenzene	460-00-4				105	% Rec.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-070914-4HR
 Collected By : Jason Flowers
 Collection Date : 07/09/14 11:21

ESC Sample # : L709812-09
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	39.	93.	TO-15	07/19/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/19/14	2
Benzene	71-43-2	78.1	0.400	1.30	0.43	1.4	TO-15	07/19/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/19/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/19/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/19/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/19/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/19/14	2
Chloroform	67-66-3	119	0.400	1.90	2.4	12.	TO-15	07/19/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/19/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/19/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	32.0	130.	72.	290	TO-15	07/19/14	160
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	0.55	2.0	TO-15	07/19/14	2
Ethanol	64-17-5	46.1	1.26	2.40	19.	36.	TO-15	07/19/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.52	2.6	TO-15	07/19/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/19/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/19/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	0.90	4.4	TO-15	07/19/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-070914-4HR
 Collected By : Jason Flowers
 Collection Date : 07/09/14 11:21

ESC Sample # : L709812-09
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	4.2	12.	TO-15	07/19/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/19/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/19/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/19/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	24.	160	TO-15	07/19/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/19/14	2
Toluene	108-88-3	92.1	0.400	1.50	2.5	9.4	TO-15	07/19/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/19/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Trichloroethylene	79-01-6	131	32.0	170.	530	2800	TO-15	07/19/14	160
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/19/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/19/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-10

Sample ID : MW-17DS-070914-OHR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/09/14 13:14

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	39.	93.	TO-15	07/19/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/19/14	2
Benzene	71-43-2	78.1	0.400	1.30	0.71	2.3	TO-15	07/19/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/19/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/19/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	2.9	9.0	TO-15	07/19/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/19/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/19/14	2
Chloroform	67-66-3	119	0.400	1.90	2.0	9.7	TO-15	07/19/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.60	1.2	TO-15	07/19/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	0.57	2.0	TO-15	07/19/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/19/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	36.	140	TO-15	07/19/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	0.90	3.6	TO-15	07/19/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Ethanol	64-17-5	46.1	1.26	2.40	68.	130	TO-15	07/19/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	0.43	1.9	TO-15	07/19/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	0.63	3.5	TO-15	07/19/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.57	2.8	TO-15	07/19/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/19/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/19/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	1.7	6.0	TO-15	07/19/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	2.9	14.	TO-15	07/19/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	1.6	5.6	TO-15	07/19/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
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 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-10

Sample ID : MW-17DS-070914-0HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/09/14 13:14

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	4.2	12.	TO-15	07/19/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/19/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	8.1	20.	TO-15	07/19/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/19/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	28.	190	TO-15	07/19/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	2.2	6.5	TO-15	07/19/14	2
Toluene	108-88-3	92.1	0.400	1.50	7.6	29.	TO-15	07/19/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/19/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Trichloroethylene	79-01-6	131	20.0	110.	350	1900	TO-15	07/19/14	100
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/19/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/19/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	1.0	4.3	TO-15	07/19/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,4-Bromofluorobenzene	460-00-4				102	% Rec.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-11

Sample ID : MW-17DS-070914-4HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/09/14 16:45

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	7.7	18.	TO-15	07/19/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/19/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/19/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/19/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/19/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/19/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/19/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/19/14	2
Chloroform	67-66-3	119	0.400	1.90	0.99	4.8	TO-15	07/19/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/19/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/19/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/19/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/19/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	18.	71.	TO-15	07/19/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/19/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Ethanol	64-17-5	46.1	1.26	2.40	3.6	6.8	TO-15	07/19/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/19/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/19/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/19/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	0.52	1.8	TO-15	07/19/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	1.4	6.9	TO-15	07/19/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-11

Sample ID : MW-17DS-070914-4HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/09/14 16:45

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/19/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/19/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/19/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/19/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/19/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/19/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/19/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	16.	110	TO-15	07/19/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/19/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.64	2.4	TO-15	07/19/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/19/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/19/14	2
Trichloroethylene	79-01-6	131	8.00	43.0	600	3200	TO-15	07/19/14	40
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/19/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/19/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/19/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/19/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/19/14	2
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/19/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-12

Sample ID : MW-17DS-071014-24HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/10/14 15:47

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	5.00	12.0	16.	38.	TO-15	07/19/14	4
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/19/14	4
Benzene	71-43-2	78.1	0.800	2.60	0.85	2.7	TO-15	07/19/14	4
Benzyl Chloride	100-44-7	127	0.800	4.20	< 0.80	< 4.2	TO-15	07/19/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/19/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/19/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/19/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/19/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/19/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/19/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/19/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/19/14	4
Chloroform	67-66-3	119	0.800	3.90	1.9	9.2	TO-15	07/19/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	< 0.80	< 1.7	TO-15	07/19/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/19/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/19/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/19/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/19/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/19/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/19/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/19/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/19/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/19/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	2.6	10.	TO-15	07/19/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	96.	380	TO-15	07/19/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	2.7	11.	TO-15	07/19/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/19/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/19/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/19/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/19/14	4
Ethanol	64-17-5	46.1	2.52	4.80	9.2	17.	TO-15	07/19/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	1.6	9.0	TO-15	07/19/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	< 0.80	< 4.0	TO-15	07/19/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/19/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/19/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/19/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/19/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	3.2	11.	TO-15	07/19/14	4
Isopropylbenzene	98-82-8	120.2	0.800	3.90	5.0	25.	TO-15	07/19/14	4
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/19/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/19/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
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 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-12

Sample ID : MW-17DS-071014-24HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/10/14 15:47

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	< 5.0	< 15.	TO-15	07/19/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/19/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/19/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/19/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/19/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	< 5.0	< 12.	TO-15	07/19/14	4
Propene	115-07-1	42.1	1.60	2.80	< 1.6	< 2.8	TO-15	07/19/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/19/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/19/14	4
Tetrachloroethylene	127-18-4	166	0.800	5.40	120	810	TO-15	07/19/14	4
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/19/14	4
Toluene	108-88-3	92.1	0.800	3.00	0.89	3.4	TO-15	07/19/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/19/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/19/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/19/14	4
Trichloroethylene	79-01-6	131	100.	540.	730	3900	TO-15	07/19/14	500
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/19/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/19/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/19/14	4
m&p-Xylene	1330-20-7	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/19/14	4
o-Xylene	95-47-6	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	4
1,4-Bromofluorobenzene	460-00-4				102	% Rec.	TO-15	07/19/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-13

Sample ID : VW-17D-95.5-071014-24HR

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/10/14 16:00

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	5.00	12.0	12.	29.	TO-15	07/19/14	4
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/19/14	4
Benzene	71-43-2	78.1	0.800	2.60	< 0.80	< 2.6	TO-15	07/19/14	4
Benzyl Chloride	100-44-7	127	0.800	4.20	< 0.80	< 4.2	TO-15	07/19/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/19/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/19/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/19/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/19/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/19/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/19/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/19/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/19/14	4
Chloroform	67-66-3	119	0.800	3.90	1.2	5.8	TO-15	07/19/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	< 0.80	< 1.7	TO-15	07/19/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/19/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	1.2	4.1	TO-15	07/19/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/19/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/19/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/19/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/19/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/19/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/19/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/19/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	4.3	17.	TO-15	07/19/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	150	590	TO-15	07/19/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	4.1	16.	TO-15	07/19/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/19/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/19/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/19/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/19/14	4
Ethanol	64-17-5	46.1	2.52	4.80	4.2	7.9	TO-15	07/19/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	2.9	16.	TO-15	07/19/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	< 0.80	< 4.0	TO-15	07/19/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/19/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/19/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/19/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/19/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	5.1	18.	TO-15	07/19/14	4
Isopropylbenzene	98-82-8	120.2	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/19/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/19/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-95.5-071014-24HR
 Collected By : Jason Flowers
 Collection Date : 07/10/14 16:00

ESC Sample # : L709812-13
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	< 5.0	< 15.	TO-15	07/19/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/19/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/19/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/19/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/19/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	< 5.0	< 12.	TO-15	07/19/14	4
Propene	115-07-1	42.1	1.60	2.80	< 1.6	< 2.8	TO-15	07/19/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/19/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/19/14	4
Tetrachloroethylene	127-18-4	166	100.	680.	110	750	TO-15	07/19/14	500
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/19/14	4
Toluene	108-88-3	92.1	0.800	3.00	0.94	3.5	TO-15	07/19/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/19/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	1.2	6.5	TO-15	07/19/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/19/14	4
Trichloroethylene	79-01-6	131	100.	540.	1600	8600	TO-15	07/19/14	500
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/19/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/19/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/19/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/19/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/19/14	4
m&p-Xylene	1330-20-7	106	1.60	6.90	8.1	35.	TO-15	07/19/14	4
o-Xylene	95-47-6	106	0.800	3.50	2.1	9.1	TO-15	07/19/14	4
1,4-Bromofluorobenzene	460-00-4				102	% Rec.	TO-15	07/19/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-071014-24HR
 Collected By : Jason Flowers
 Collection Date : 07/10/14 16:05

ESC Sample # : L709812-14
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	10.0	24.0	12.	29.	TO-15	07/19/14	8
Allyl chloride	107-05-1	76.53	1.60	5.00	< 1.6	< 5.0	TO-15	07/19/14	8
Benzene	71-43-2	78.1	1.60	5.10	< 1.6	< 5.1	TO-15	07/19/14	8
Benzyl Chloride	100-44-7	127	1.60	8.30	< 1.6	< 8.3	TO-15	07/19/14	8
Bromodichloromethane	75-27-4	164	1.60	11.0	< 1.6	< 11.	TO-15	07/19/14	8
Bromoform	75-25-2	253	4.80	50.0	< 4.8	< 50.	TO-15	07/19/14	8
Bromomethane	74-83-9	94.9	1.60	6.20	< 1.6	< 6.2	TO-15	07/19/14	8
1,3-Butadiene	106-99-0	54.1	16.0	35.0	< 16.	< 35.	TO-15	07/19/14	8
Carbon disulfide	75-15-0	76.1	1.60	5.00	< 1.6	< 5.0	TO-15	07/19/14	8
Carbon tetrachloride	56-23-5	154	1.60	10.0	< 1.6	< 10.	TO-15	07/19/14	8
Chlorobenzene	108-90-7	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/19/14	8
Chloroethane	75-00-3	64.5	1.60	4.20	< 1.6	< 4.2	TO-15	07/19/14	8
Chloroform	67-66-3	119	1.60	7.80	< 1.6	< 7.8	TO-15	07/19/14	8
Chloromethane	74-87-3	50.5	1.60	3.30	< 1.6	< 3.3	TO-15	07/19/14	8
2-Chlorotoluene	95-49-8	126	1.60	8.20	< 1.6	< 8.2	TO-15	07/19/14	8
Cyclohexane	110-82-7	84.2	1.60	5.50	17.	59.	TO-15	07/19/14	8
Dibromochloromethane	124-48-1	208	1.60	14.0	< 1.6	< 14.	TO-15	07/19/14	8
1,2-Dibromoethane	106-93-4	188	1.60	12.0	< 1.6	< 12.	TO-15	07/19/14	8
1,2-Dichlorobenzene	95-50-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/19/14	8
1,3-Dichlorobenzene	541-73-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/19/14	8
1,4-Dichlorobenzene	106-46-7	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/19/14	8
1,2-Dichloroethane	107-06-2	99	1.60	6.50	< 1.6	< 6.5	TO-15	07/19/14	8
1,1-Dichloroethane	75-34-3	98	1.60	6.40	< 1.6	< 6.4	TO-15	07/19/14	8
1,1-Dichloroethene	75-35-4	96.9	1.60	6.30	3.6	14.	TO-15	07/19/14	8
cis-1,2-Dichloroethene	156-59-2	96.9	1.60	6.30	120	480	TO-15	07/19/14	8
trans-1,2-Dichloroethene	156-60-5	96.9	1.60	6.30	3.9	15.	TO-15	07/19/14	8
1,2-Dichloropropane	78-87-5	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/19/14	8
cis-1,3-Dichloropropene	10061-01-5	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/19/14	8
trans-1,3-Dichloropropene	10061-02-6	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/19/14	8
1,4-Dioxane	123-91-1	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/19/14	8
Ethanol	64-17-5	46.1	5.04	9.50	9.1	17.	TO-15	07/19/14	8
Ethylbenzene	100-41-4	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/19/14	8
4-Ethyltoluene	622-96-8	120	1.60	7.90	13.	64.	TO-15	07/19/14	8
Trichlorofluoromethane	75-69-4	137.4	1.60	9.00	3.2	18.	TO-15	07/19/14	8
Dichlorodifluoromethane	75-71-8	120.92	1.60	7.90	< 1.6	< 7.9	TO-15	07/19/14	8
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	1.60	12.0	< 1.6	< 12.	TO-15	07/19/14	8
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.60	11.0	< 1.6	< 11.	TO-15	07/19/14	8
Heptane	142-82-5	100	1.60	6.50	6.4	26.	TO-15	07/19/14	8
Hexachloro-1,3-butadiene	87-68-3	261	5.04	54.0	< 5.0	< 54.	TO-15	07/19/14	8
n-Hexane	110-54-3	86.2	1.60	5.60	75.	260	TO-15	07/19/14	8
Isopropylbenzene	98-82-8	120.2	1.60	7.90	< 1.6	< 7.9	TO-15	07/19/14	8
Methylene Chloride	75-09-2	84.9	1.60	5.60	< 1.6	< 5.6	TO-15	07/19/14	8
Methyl Butyl Ketone	591-78-6	100	10.0	41.0	< 10.	< 41.	TO-15	07/19/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-071014-24HR
 Collected By : Jason Flowers
 Collection Date : 07/10/14 16:05

ESC Sample # : L709812-14
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	10.0	29.0	< 10.	< 29.	TO-15	07/19/14	8
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	10.0	41.0	< 10.	< 41.	TO-15	07/19/14	8
Methyl methacrylate	80-62-6	100.12	1.60	6.60	< 1.6	< 6.6	TO-15	07/19/14	8
MTBE	1634-04-4	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/19/14	8
Naphthalene	91-20-3	128	5.04	26.0	< 5.0	< 26.	TO-15	07/19/14	8
2-Propanol	67-63-0	60.1	10.0	25.0	< 10.	< 25.	TO-15	07/19/14	8
Propene	115-07-1	42.1	3.20	5.50	< 3.2	< 5.5	TO-15	07/19/14	8
Styrene	100-42-5	104	1.60	6.80	< 1.6	< 6.8	TO-15	07/19/14	8
1,1,2,2-Tetrachloroethane	79-34-5	168	1.60	11.0	< 1.6	< 11.	TO-15	07/19/14	8
Tetrachloroethylene	127-18-4	166	1.60	11.0	160	1100	TO-15	07/19/14	8
Tetrahydrofuran	109-99-9	72.1	1.60	4.70	< 1.6	< 4.7	TO-15	07/19/14	8
Toluene	108-88-3	92.1	1.60	6.00	4.5	17.	TO-15	07/19/14	8
1,2,4-Trichlorobenzene	120-82-1	181	5.04	37.0	< 5.0	< 37.	TO-15	07/19/14	8
1,1,1-Trichloroethane	71-55-6	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/19/14	8
1,1,2-Trichloroethane	79-00-5	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/19/14	8
Trichloroethylene	79-01-6	131	160.	860.	1500	8000	TO-15	07/19/14	800
1,2,4-Trimethylbenzene	95-63-6	120	1.60	7.90	80.	390	TO-15	07/19/14	8
1,3,5-Trimethylbenzene	108-67-8	120	1.60	7.90	48.	240	TO-15	07/19/14	8
2,2,4-Trimethylpentane	540-84-1	114.22	1.60	7.50	< 1.6	< 7.5	TO-15	07/19/14	8
Vinyl chloride	75-01-4	62.5	1.60	4.10	< 1.6	< 4.1	TO-15	07/19/14	8
Vinyl Bromide	593-60-2	106.95	1.60	7.00	< 1.6	< 7.0	TO-15	07/19/14	8
Vinyl acetate	108-05-4	86.1	1.60	5.60	< 1.6	< 5.6	TO-15	07/19/14	8
m&p-Xylene	1330-20-7	106	3.20	14.0	36.	160	TO-15	07/19/14	8
o-Xylene	95-47-6	106	1.60	6.90	4.0	17.	TO-15	07/19/14	8
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/19/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 1-800-767-5859
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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-15

Sample ID : DUP#2-071014

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/10/14 16:10

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	20.	48.	TO-15	07/20/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/20/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/20/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/20/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/20/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/20/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/20/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/20/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/20/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/20/14	2
Chloroform	67-66-3	119	0.400	1.90	0.70	3.4	TO-15	07/20/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/20/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/20/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/20/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/20/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/20/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/20/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/20/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	2.6	10.	TO-15	07/20/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	20.0	79.0	71.	280	TO-15	07/21/14	100
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	3.0	12.	TO-15	07/20/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Ethanol	64-17-5	46.1	1.26	2.40	5.8	11.	TO-15	07/20/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/20/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	2.3	13.	TO-15	07/20/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.66	3.3	TO-15	07/20/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/20/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/20/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/20/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	0.47	2.3	TO-15	07/20/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	5.1	18.	TO-15	07/20/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/20/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project

ESC Sample # : L709812-15

Sample ID : DUP#2-071014

Site ID :

Collected By : Jason Flowers
 Collection Date : 07/10/14 16:10

Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	2.8	8.3	TO-15	07/20/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/20/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/20/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/20/14	2
Propene	115-07-1	42.1	0.800	1.40	0.94	1.6	TO-15	07/20/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/20/14	2
Tetrachloroethylene	127-18-4	166	20.0	140.	110	750	TO-15	07/21/14	100
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/20/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.68	2.6	TO-15	07/20/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/20/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	0.72	3.9	TO-15	07/20/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/20/14	2
Trichloroethylene	79-01-6	131	20.0	110.	1600	8600	TO-15	07/21/14	100
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/20/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/20/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/20/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/20/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/20/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/20/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-071014-24HR
 Collected By : Jason Flowers
 Collection Date : 07/10/14 16:20

ESC Sample # : L709812-16
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	18.	43.	TO-15	07/20/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/20/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/20/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/20/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/20/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/20/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/20/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/20/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/20/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/20/14	2
Chloroform	67-66-3	119	0.400	1.90	1.7	8.3	TO-15	07/20/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/20/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/20/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/20/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/20/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/20/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/20/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/20/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	20.0	79.0	54.	210	TO-15	07/21/14	100
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/20/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Ethanol	64-17-5	46.1	1.26	2.40	11.	21.	TO-15	07/20/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/20/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/20/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.45	2.2	TO-15	07/20/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/20/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/20/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/20/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	0.51	2.5	TO-15	07/20/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/20/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 21, 2014

Date Received : July 12, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-071014-24HR
 Collected By : Jason Flowers
 Collection Date : 07/10/14 16:20

ESC Sample # : L709812-16
 Site ID :
 Project # : PNG0564S14-02

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	2.9	8.6	TO-15	07/20/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/20/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/20/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/20/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/20/14	2
Propene	115-07-1	42.1	0.800	1.40	2.9	2.9	TO-15	07/20/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/20/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	18.	120	TO-15	07/20/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/20/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.59	2.2	TO-15	07/20/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/20/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/20/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/20/14	2
Trichloroethylene	79-01-6	131	20.0	110.	400	2100	TO-15	07/21/14	100
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/20/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/20/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/20/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/20/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/20/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/20/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/20/14	2
1,4-Bromofluorobenzene	460-00-4				101	% Rec.	TO-15	07/20/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L709812-01	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-02	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-03	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-04	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-05	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-06	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-07	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-08	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-09	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-10	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-11	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-12	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-13	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-14	WG732486	SAMP	Benzyl Chloride	R2964890	L1
L709812-15	WG732671	SAMP	Benzyl Chloride	R2965994	J4
	WG732671	SAMP	Dichlorodifluoromethane	R2965994	J4
L709812-16	WG732671	SAMP	Benzyl Chloride	R2965994	J4
	WG732671	SAMP	Dichlorodifluoromethane	R2965994	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
L1	(ESC) The associated batch LCS exceeded the upper control limit, which indicates a high bias; The sample analyte was "not detected" and is therefore unaffected.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
07/21/14 at 16:54:17

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L709812-01 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold + 5 tedlar bags that were used in the field
Sample: L709812-02 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-03 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-04 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-05 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-06 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-07 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-08 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-09 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-10 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-11 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-12 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-13 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-14 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-15 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold
Sample: L709812-16 Account: GEOSYNBSWA Received: 07/12/14 08:30 Due Date: 07/18/14 00:00 RPT Date: 07/21/14 16:52
1L summa and sampling manifold



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
 Jason Flowers
 1201 3rd Ave, Suite #330

Seattle, WA 98101

Quality Assurance Report
 Level II

L709812

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 21, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1-Trichloroethane	< .2	ppb			WG732486	07/18/14 13:45
1,1,2,2-Tetrachloroethane	< .2	ppb			WG732486	07/18/14 13:45
1,1,2-Trichloroethane	< .2	ppb			WG732486	07/18/14 13:45
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG732486	07/18/14 13:45
1,1-Dichloroethane	< .2	ppb			WG732486	07/18/14 13:45
1,1-Dichloroethene	< .2	ppb			WG732486	07/18/14 13:45
1,2,4-Trichlorobenzene	< .63	ppb			WG732486	07/18/14 13:45
1,2,4-Trimethylbenzene	< .2	ppb			WG732486	07/18/14 13:45
1,2-Dibromoethane	< .2	ppb			WG732486	07/18/14 13:45
1,2-Dichlorobenzene	< .2	ppb			WG732486	07/18/14 13:45
1,2-Dichloroethane	< .2	ppb			WG732486	07/18/14 13:45
1,2-Dichloropropane	< .2	ppb			WG732486	07/18/14 13:45
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG732486	07/18/14 13:45
1,3,5-Trimethylbenzene	< .2	ppb			WG732486	07/18/14 13:45
1,3-Butadiene	< 2	ppb			WG732486	07/18/14 13:45
1,3-Dichlorobenzene	< .2	ppb			WG732486	07/18/14 13:45
1,4-Dichlorobenzene	< .2	ppb			WG732486	07/18/14 13:45
1,4-Dioxane	< .2	ppb			WG732486	07/18/14 13:45
2,2,4-Trimethylpentane	< .2	ppb			WG732486	07/18/14 13:45
2-Butanone (MEK)	< 1.25	ppb			WG732486	07/18/14 13:45
2-Chlorotoluene	< .2	ppb			WG732486	07/18/14 13:45
2-Propanol	< 1.25	ppb			WG732486	07/18/14 13:45
4-Ethyltoluene	< .2	ppb			WG732486	07/18/14 13:45
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG732486	07/18/14 13:45
Acetone	< 1.25	ppb			WG732486	07/18/14 13:45
Allyl chloride	< .2	ppb			WG732486	07/18/14 13:45
Benzene	< .2	ppb			WG732486	07/18/14 13:45
Benzyl Chloride	< .2	ppb			WG732486	07/18/14 13:45
Bromodichloromethane	< .2	ppb			WG732486	07/18/14 13:45
Bromoform	< .6	ppb			WG732486	07/18/14 13:45
Bromomethane	< .2	ppb			WG732486	07/18/14 13:45
Carbon disulfide	< .2	ppb			WG732486	07/18/14 13:45
Carbon tetrachloride	< .2	ppb			WG732486	07/18/14 13:45
Chlorobenzene	< .2	ppb			WG732486	07/18/14 13:45
Dibromochloromethane	< .2	ppb			WG732486	07/18/14 13:45
Chloroethane	< .2	ppb			WG732486	07/18/14 13:45
Chloroform	< .2	ppb			WG732486	07/18/14 13:45
Chloromethane	< .2	ppb			WG732486	07/18/14 13:45
cis-1,2-Dichloroethene	< .2	ppb			WG732486	07/18/14 13:45
cis-1,3-Dichloropropene	< .2	ppb			WG732486	07/18/14 13:45
Cyclohexane	< .2	ppb			WG732486	07/18/14 13:45
Dichlorodifluoromethane	< .2	ppb			WG732486	07/18/14 13:45
Ethanol	< .63	ppb			WG732486	07/18/14 13:45
Ethylbenzene	< .2	ppb			WG732486	07/18/14 13:45
Heptane	< .2	ppb			WG732486	07/18/14 13:45
Hexachloro-1,3-butadiene	< .63	ppb			WG732486	07/18/14 13:45
Isopropylbenzene	< .2	ppb			WG732486	07/18/14 13:45
m&p-Xylene	< .4	ppb			WG732486	07/18/14 13:45
Methyl Butyl Ketone	< 1.25	ppb			WG732486	07/18/14 13:45
Methyl methacrylate	< .2	ppb			WG732486	07/18/14 13:45
MTBE	< .2	ppb			WG732486	07/18/14 13:45
Methylene Chloride	< .2	ppb			WG732486	07/18/14 13:45
n-Hexane	< .2	ppb			WG732486	07/18/14 13:45
Naphthalene	< .63	ppb			WG732486	07/18/14 13:45
o-Xylene	< .2	ppb			WG732486	07/18/14 13:45
Propene	< .4	ppb			WG732486	07/18/14 13:45
Styrene	< .2	ppb			WG732486	07/18/14 13:45
Tetrachloroethylene	< .2	ppb			WG732486	07/18/14 13:45
Tetrahydrofuran	< .2	ppb			WG732486	07/18/14 13:45

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Seattle, WA 98101

Quality Assurance Report
 Level II

L709812

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 Mt. Juliet, TN 37122
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 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 21, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .2	ppb			WG732486	07/18/14 13:45
trans-1,2-Dichloroethene	< .2	ppb			WG732486	07/18/14 13:45
trans-1,3-Dichloropropene	< .2	ppb			WG732486	07/18/14 13:45
Trichloroethylene	< .2	ppb			WG732486	07/18/14 13:45
Trichlorofluoromethane	< .2	ppb			WG732486	07/18/14 13:45
Vinyl acetate	< .2	ppb			WG732486	07/18/14 13:45
Vinyl Bromide	< .2	ppb			WG732486	07/18/14 13:45
Vinyl chloride	< .2	ppb			WG732486	07/18/14 13:45
1,4-Bromofluorobenzene		% Rec.	96.60	60-140	WG732486	07/18/14 13:45
Acetone	< 1.25	ppb			WG732659	07/19/14 09:58
cis-1,2-Dichloroethene	< .2	ppb			WG732659	07/19/14 09:58
m&p-Xylene	< .4	ppb			WG732659	07/19/14 09:58
o-Xylene	< .2	ppb			WG732659	07/19/14 09:58
Tetrachloroethylene	< .2	ppb			WG732659	07/19/14 09:58
Trichloroethylene	< .2	ppb			WG732659	07/19/14 09:58
1,4-Bromofluorobenzene		% Rec.	107.0	60-140	WG732659	07/19/14 09:58
1,1,1-Trichloroethane	< .2	ppb			WG732671	07/19/14 12:25
1,1,2,2-Tetrachloroethane	< .2	ppb			WG732671	07/19/14 12:25
1,1,2-Trichloroethane	< .2	ppb			WG732671	07/19/14 12:25
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG732671	07/19/14 12:25
1,1-Dichloroethane	< .2	ppb			WG732671	07/19/14 12:25
1,1-Dichloroethene	< .2	ppb			WG732671	07/19/14 12:25
1,2,4-Trichlorobenzene	< .63	ppb			WG732671	07/19/14 12:25
1,2,4-Trimethylbenzene	< .2	ppb			WG732671	07/19/14 12:25
1,2-Dibromoethane	< .2	ppb			WG732671	07/19/14 12:25
1,2-Dichlorobenzene	< .2	ppb			WG732671	07/19/14 12:25
1,2-Dichloroethane	< .2	ppb			WG732671	07/19/14 12:25
1,2-Dichloropropane	< .2	ppb			WG732671	07/19/14 12:25
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG732671	07/19/14 12:25
1,3,5-Trimethylbenzene	< .2	ppb			WG732671	07/19/14 12:25
1,3-Butadiene	< 2	ppb			WG732671	07/19/14 12:25
1,3-Dichlorobenzene	< .2	ppb			WG732671	07/19/14 12:25
1,4-Dichlorobenzene	< .2	ppb			WG732671	07/19/14 12:25
1,4-Dioxane	< .2	ppb			WG732671	07/19/14 12:25
2,2,4-Trimethylpentane	< .2	ppb			WG732671	07/19/14 12:25
2-Butanone (MEK)	< 1.25	ppb			WG732671	07/19/14 12:25
2-Chlorotoluene	< .2	ppb			WG732671	07/19/14 12:25
2-Propanol	< 1.25	ppb			WG732671	07/19/14 12:25
4-Ethyltoluene	< .2	ppb			WG732671	07/19/14 12:25
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG732671	07/19/14 12:25
Acetone	< 1.25	ppb			WG732671	07/19/14 12:25
Allyl chloride	< .2	ppb			WG732671	07/19/14 12:25
Benzene	< .2	ppb			WG732671	07/19/14 12:25
Benzyl Chloride	< .2	ppb			WG732671	07/19/14 12:25
Bromodichloromethane	< .2	ppb			WG732671	07/19/14 12:25
Bromoform	< .6	ppb			WG732671	07/19/14 12:25
Bromomethane	< .2	ppb			WG732671	07/19/14 12:25
Carbon disulfide	< .2	ppb			WG732671	07/19/14 12:25
Carbon tetrachloride	< .2	ppb			WG732671	07/19/14 12:25
Chlorobenzene	< .2	ppb			WG732671	07/19/14 12:25
Dibromochloromethane	< .2	ppb			WG732671	07/19/14 12:25
Chloroethane	< .2	ppb			WG732671	07/19/14 12:25
Chloroform	< .2	ppb			WG732671	07/19/14 12:25
Chloromethane	< .2	ppb			WG732671	07/19/14 12:25
cis-1,3-Dichloropropene	< .2	ppb			WG732671	07/19/14 12:25

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Tax I.D. 62-0814289

Est. 1970

July 21, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cyclohexane	< .2	ppb			WG732671	07/19/14 12:25
Dichlorodifluoromethane	< .2	ppb			WG732671	07/19/14 12:25
Ethanol	< .63	ppb			WG732671	07/19/14 12:25
Ethylbenzene	< .2	ppb			WG732671	07/19/14 12:25
Heptane	< .2	ppb			WG732671	07/19/14 12:25
Hexachloro-1,3-butadiene	< .63	ppb			WG732671	07/19/14 12:25
Isopropylbenzene	< .2	ppb			WG732671	07/19/14 12:25
m&p-Xylene	< .4	ppb			WG732671	07/19/14 12:25
Methyl Butyl Ketone	< 1.25	ppb			WG732671	07/19/14 12:25
Methyl methacrylate	< .2	ppb			WG732671	07/19/14 12:25
MTBE	< .2	ppb			WG732671	07/19/14 12:25
Methylene Chloride	< .2	ppb			WG732671	07/19/14 12:25
n-Hexane	< .2	ppb			WG732671	07/19/14 12:25
Naphthalene	< .63	ppb			WG732671	07/19/14 12:25
o-Xylene	< .2	ppb			WG732671	07/19/14 12:25
Propene	< .4	ppb			WG732671	07/19/14 12:25
Styrene	< .2	ppb			WG732671	07/19/14 12:25
Tetrachloroethylene	< .2	ppb			WG732671	07/19/14 12:25
Tetrahydrofuran	< .2	ppb			WG732671	07/19/14 12:25
Toluene	< .2	ppb			WG732671	07/19/14 12:25
trans-1,2-Dichloroethene	< .2	ppb			WG732671	07/19/14 12:25
trans-1,3-Dichloropropene	< .2	ppb			WG732671	07/19/14 12:25
Trichlorofluoromethane	< .2	ppb			WG732671	07/19/14 12:25
Vinyl acetate	< .2	ppb			WG732671	07/19/14 12:25
Vinyl Bromide	< .2	ppb			WG732671	07/19/14 12:25
Vinyl chloride	< .2	ppb			WG732671	07/19/14 12:25
1,4-Bromofluorobenzene		% Rec.	102.0	60-140	WG732671	07/19/14 12:25
cis-1,2-Dichloroethene	< .2	ppb			WG732843	07/21/14 11:57
Tetrachloroethylene	< .2	ppb			WG732843	07/21/14 11:57
Trichloroethylene	< .2	ppb			WG732843	07/21/14 11:57
1,4-Bromofluorobenzene		% Rec.	107.0	60-140	WG732843	07/21/14 11:57

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	ppb	3.75	3.76	100.	70-130	WG732486
1,1,2,2-Tetrachloroethane	ppb	3.75	3.78	101.	70-130	WG732486
1,1,2-Trichloroethane	ppb	3.75	3.79	101.	70-130	WG732486
1,1,2-Trichlorotrifluoroethane	ppb	3.75	3.60	96.0	70-130	WG732486
1,1-Dichloroethane	ppb	3.75	3.67	98.0	70-130	WG732486
1,1-Dichloroethene	ppb	3.75	3.47	92.5	70-130	WG732486
1,2,4-Trichlorobenzene	ppb	3.75	4.32	115.	59.7-155	WG732486
1,2,4-Trimethylbenzene	ppb	3.75	3.78	101.	70-130	WG732486
1,2-Dibromoethane	ppb	3.75	3.96	106.	70-130	WG732486
1,2-Dichlorobenzene	ppb	3.75	3.92	105.	70-130	WG732486
1,2-Dichloroethane	ppb	3.75	3.55	94.6	70-130	WG732486
1,2-Dichloropropane	ppb	3.75	3.58	95.4	70-130	WG732486
1,2-Dichlorotetrafluoroethane	ppb	3.75	3.99	106.	70-130	WG732486
1,3,5-Trimethylbenzene	ppb	3.75	3.78	101.	70-130	WG732486
1,3-Butadiene	ppb	3.75	3.68	98.0	70-130	WG732486
1,3-Dichlorobenzene	ppb	3.75	3.92	104.	70-130	WG732486
1,4-Dichlorobenzene	ppb	3.75	3.95	105.	70-130	WG732486
1,4-Dioxane	ppb	3.75	4.27	114.	70-130	WG732486
2,2,4-Trimethylpentane	ppb	3.75	3.70	98.6	70-130	WG732486
2-Butanone (MEK)	ppb	3.75	3.95	105.	70-130	WG732486
2-Chlorotoluene	ppb	3.75	3.63	96.8	70-130	WG732486
2-Propanol	ppb	3.75	3.94	105.	62.2-137	WG732486

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
4-Ethyltoluene	ppb	3.75	3.71	98.9	70-130	WG732486
4-Methyl-2-pentanone (MIBK)	ppb	3.75	3.92	105.	51.3-144	WG732486
Acetone	ppb	3.75	3.56	95.0	70-130	WG732486
Allyl chloride	ppb	3.75	3.61	96.2	70-130	WG732486
Benzene	ppb	3.75	3.56	94.9	70-130	WG732486
Benzyl Chloride	ppb	3.75	5.13	137.*	70-130	WG732486
Bromodichloromethane	ppb	3.75	3.75	100.	70-130	WG732486
Bromoform	ppb	3.75	4.00	107.	70-130	WG732486
Bromomethane	ppb	3.75	3.90	104.	70-130	WG732486
Carbon disulfide	ppb	3.75	3.77	101.	70-130	WG732486
Carbon tetrachloride	ppb	3.75	3.88	103.	70-130	WG732486
Chlorobenzene	ppb	3.75	3.85	103.	70-130	WG732486
Dibromochloromethane	ppb	3.75	4.06	108.	70-130	WG732486
Chloroethane	ppb	3.75	3.62	96.5	70-130	WG732486
Chloroform	ppb	3.75	3.76	100.	70-130	WG732486
Chloromethane	ppb	3.75	3.92	105.	70-130	WG732486
cis-1,2-Dichloroethene	ppb	3.75	3.69	98.4	70-130	WG732486
cis-1,3-Dichloropropene	ppb	3.75	3.82	102.	70-130	WG732486
Cyclohexane	ppb	3.75	3.74	99.8	70-130	WG732486
Dichlorodifluoromethane	ppb	3.75	4.69	125.	70-130	WG732486
Ethanol	ppb	3.75	4.39	117.	52.6-145	WG732486
Ethylbenzene	ppb	3.75	3.65	97.2	70-130	WG732486
Heptane	ppb	3.75	3.47	92.6	70-130	WG732486
Hexachloro-1,3-butadiene	ppb	3.75	4.05	108.	55.7-144	WG732486
Isopropylbenzene	ppb	3.75	3.72	99.3	70-130	WG732486
m&p-Xylene	ppb	7.5	7.05	94.0	70-130	WG732486
Methyl Butyl Ketone	ppb	3.75	4.34	116.	36.5-155	WG732486
Methyl methacrylate	ppb	3.75	3.33	88.8	70-130	WG732486
MTBE	ppb	3.75	3.73	99.4	70-130	WG732486
Methylene Chloride	ppb	3.75	3.39	90.3	70-130	WG732486
n-Hexane	ppb	3.75	3.57	95.1	70-130	WG732486
Naphthalene	ppb	3.75	4.60	123.	53.4-158	WG732486
o-Xylene	ppb	3.75	3.64	97.2	70-130	WG732486
Propene	ppb	3.75	3.85	103.	70-130	WG732486
Styrene	ppb	3.75	3.83	102.	70-130	WG732486
Tetrachloroethylene	ppb	3.75	3.80	101.	70-130	WG732486
Tetrahydrofuran	ppb	3.75	3.83	102.	70-130	WG732486
Toluene	ppb	3.75	3.73	99.4	70-130	WG732486
trans-1,2-Dichloroethene	ppb	3.75	3.70	98.7	70-130	WG732486
trans-1,3-Dichloropropene	ppb	3.75	3.97	106.	70-130	WG732486
Trichloroethylene	ppb	3.75	3.61	96.3	70-130	WG732486
Trichlorofluoromethane	ppb	3.75	3.69	98.5	70-130	WG732486
Vinyl acetate	ppb	3.75	3.73	99.5	70-130	WG732486
Vinyl Bromide	ppb	3.75	3.76	100.	70-130	WG732486
Vinyl chloride	ppb	3.75	3.95	105.	70-130	WG732486
1,4-Bromofluorobenzene				101.0	60-140	WG732486
Acetone	ppb	3.75	3.78	101.	70-130	WG732659
cis-1,2-Dichloroethene	ppb	3.75	3.46	92.2	70-130	WG732659
m&p-Xylene	ppb	7.5	6.95	92.6	70-130	WG732659
o-Xylene	ppb	3.75	3.57	95.2	70-130	WG732659
Tetrachloroethylene	ppb	3.75	3.39	90.5	70-130	WG732659
Trichloroethylene	ppb	3.75	3.45	92.1	70-130	WG732659
1,4-Bromofluorobenzene				103.0	60-140	WG732659
1,1,1-Trichloroethane	ppb	3.75	3.61	96.2	70-130	WG732671
1,1,2,2-Tetrachloroethane	ppb	3.75	3.70	98.6	70-130	WG732671

* Performance of this Analyte is outside of established criteria.

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 Jason Flowers
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Seattle, WA 98101

Quality Assurance Report
 Level II

L709812

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 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 21, 2014

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,2-Trichloroethane	ppb	3.75	3.56	94.8	70-130	WG732671
1,1,2-Trichlorotrifluoroethane	ppb	3.75	3.80	101.	70-130	WG732671
1,1-Dichloroethane	ppb	3.75	3.68	98.2	70-130	WG732671
1,1-Dichloroethene	ppb	3.75	3.52	94.0	70-130	WG732671
1,2,4-Trichlorobenzene	ppb	3.75	3.91	104.	59.7-155	WG732671
1,2,4-Trimethylbenzene	ppb	3.75	3.66	97.6	70-130	WG732671
1,2-Dibromoethane	ppb	3.75	3.65	97.4	70-130	WG732671
1,2-Dichlorobenzene	ppb	3.75	3.61	96.4	70-130	WG732671
1,2-Dichloroethane	ppb	3.75	3.22	85.8	70-130	WG732671
1,2-Dichloropropane	ppb	3.75	3.47	92.6	70-130	WG732671
1,2-Dichlorotetrafluoroethane	ppb	3.75	3.27	87.1	70-130	WG732671
1,3,5-Trimethylbenzene	ppb	3.75	3.80	101.	70-130	WG732671
1,3-Butadiene	ppb	3.75	3.24	86.3	70-130	WG732671
1,3-Dichlorobenzene	ppb	3.75	3.64	97.0	70-130	WG732671
1,4-Dichlorobenzene	ppb	3.75	3.66	97.7	70-130	WG732671
1,4-Dioxane	ppb	3.75	4.03	107.	70-130	WG732671
2,2,4-Trimethylpentane	ppb	3.75	3.63	96.7	70-130	WG732671
2-Butanone (MEK)	ppb	3.75	3.95	105.	70-130	WG732671
2-Chlorotoluene	ppb	3.75	3.54	94.5	70-130	WG732671
2-Propanol	ppb	3.75	3.94	105.	62.2-137	WG732671
4-Ethyltoluene	ppb	3.75	3.65	97.3	70-130	WG732671
4-Methyl-2-pentanone (MIBK)	ppb	3.75	3.71	99.0	51.3-144	WG732671
Acetone	ppb	3.75	3.48	92.7	70-130	WG732671
Allyl chloride	ppb	3.75	3.65	97.4	70-130	WG732671
Benzene	ppb	3.75	3.44	91.7	70-130	WG732671
Benzyl Chloride	ppb	3.75	5.04	134.*	70-130	WG732671
Bromodichloromethane	ppb	3.75	3.49	93.1	70-130	WG732671
Bromoform	ppb	3.75	3.65	97.2	70-130	WG732671
Bromomethane	ppb	3.75	3.78	101.	70-130	WG732671
Carbon disulfide	ppb	3.75	3.97	106.	70-130	WG732671
Carbon tetrachloride	ppb	3.75	3.65	97.2	70-130	WG732671
Chlorobenzene	ppb	3.75	3.54	94.5	70-130	WG732671
Dibromochloromethane	ppb	3.75	3.70	98.6	70-130	WG732671
Chloroethane	ppb	3.75	3.63	96.7	70-130	WG732671
Chloroform	ppb	3.75	3.62	96.5	70-130	WG732671
Chloromethane	ppb	3.75	3.35	89.2	70-130	WG732671
cis-1,3-Dichloropropene	ppb	3.75	3.70	98.6	70-130	WG732671
Cyclohexane	ppb	3.75	3.76	100.	70-130	WG732671
Dichlorodifluoromethane	ppb	3.75	2.50	66.7*	70-130	WG732671
Ethanol	ppb	3.75	4.61	123.	52.6-145	WG732671
Ethylbenzene	ppb	3.75	3.47	92.5	70-130	WG732671
Heptane	ppb	3.75	3.27	87.1	70-130	WG732671
Hexachloro-1,3-butadiene	ppb	3.75	3.45	92.1	55.7-144	WG732671
Isopropylbenzene	ppb	3.75	3.60	96.1	70-130	WG732671
m&p-Xylene	ppb	7.5	6.72	89.5	70-130	WG732671
Methyl Butyl Ketone	ppb	3.75	3.95	105.	36.5-155	WG732671
Methyl methacrylate	ppb	3.75	3.08	82.1	70-130	WG732671
MTBE	ppb	3.75	3.72	99.2	70-130	WG732671
Methylene Chloride	ppb	3.75	3.37	89.8	70-130	WG732671
n-Hexane	ppb	3.75	3.66	97.6	70-130	WG732671
Naphthalene	ppb	3.75	4.25	113.	53.4-158	WG732671
o-Xylene	ppb	3.75	3.52	93.9	70-130	WG732671
Propene	ppb	3.75	3.26	86.8	70-130	WG732671
Styrene	ppb	3.75	3.64	97.1	70-130	WG732671
Tetrachloroethylene	ppb	3.75	3.35	89.4	70-130	WG732671
Tetrahydrofuran	ppb	3.75	3.70	98.7	70-130	WG732671
Toluene	ppb	3.75	3.51	93.7	70-130	WG732671
trans-1,2-Dichloroethene	ppb	3.75	3.71	98.8	70-130	WG732671
trans-1,3-Dichloropropene	ppb	3.75	3.74	99.8	70-130	WG732671

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Trichlorofluoromethane	ppb	3.75	3.56	94.8	70-130	WG732671
Vinyl acetate	ppb	3.75	3.73	99.4	70-130	WG732671
Vinyl Bromide	ppb	3.75	3.87	103.	70-130	WG732671
Vinyl chloride	ppb	3.75	3.49	93.1	70-130	WG732671
1,4-Bromofluorobenzene				102.0	60-140	WG732671
cis-1,2-Dichloroethene	ppb	3.75	3.58	95.4	70-130	WG732843
Tetrachloroethylene	ppb	3.75	3.52	94.0	70-130	WG732843
Trichloroethylene	ppb	3.75	3.50	93.4	70-130	WG732843
1,4-Bromofluorobenzene				105.0	60-140	WG732843

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1,1-Trichloroethane	ppb	3.79	3.76	101.	70-130	0.670	25	WG732486
1,1,2,2-Tetrachloroethane	ppb	3.84	3.78	102.	70-130	1.76	25	WG732486
1,1,2-Trichloroethane	ppb	3.83	3.79	102.	70-130	0.930	25	WG732486
1,1,2-Trichlorotrifluoroethane	ppb	3.65	3.60	97.0	70-130	1.49	25	WG732486
1,1-Dichloroethane	ppb	3.71	3.67	99.0	70-130	1.07	25	WG732486
1,1-Dichloroethene	ppb	3.55	3.47	95.0	70-130	2.24	25	WG732486
1,2,4-Trichlorobenzene	ppb	4.47	4.32	119.	59.7-155	3.40	25	WG732486
1,2,4-Trimethylbenzene	ppb	3.91	3.78	104.	70-130	3.43	25	WG732486
1,2-Dibromoethane	ppb	4.03	3.96	108.	70-130	1.78	25	WG732486
1,2-Dichlorobenzene	ppb	4.05	3.92	108.	70-130	3.12	25	WG732486
1,2-Dichloroethane	ppb	3.55	3.55	95.0	70-130	0.130	25	WG732486
1,2-Dichloropropane	ppb	3.61	3.58	96.0	70-130	1.09	25	WG732486
1,2-Dichlorotetrafluoroethane	ppb	4.02	3.99	107.	70-130	0.810	25	WG732486
1,3,5-Trimethylbenzene	ppb	3.99	3.78	106.	70-130	5.49	25	WG732486
1,3-Butadiene	ppb	3.73	3.68	99.0	70-130	1.40	25	WG732486
1,3-Dichlorobenzene	ppb	4.06	3.92	108.	70-130	3.60	25	WG732486
1,4-Dichlorobenzene	ppb	4.11	3.95	109.	70-130	3.79	25	WG732486
1,4-Dioxane	ppb	4.36	4.27	116.	70-130	2.09	25	WG732486
2,2,4-Trimethylpentane	ppb	3.68	3.70	98.0	70-130	0.410	25	WG732486
2-Butanone (MEK)	ppb	3.90	3.95	104.	70-130	1.44	25	WG732486
2-Chlorotoluene	ppb	3.78	3.63	101.	70-130	4.01	25	WG732486
2-Propanol	ppb	4.06	3.94	108.	62.2-137	3.14	25	WG732486
4-Ethyltoluene	ppb	3.88	3.71	104.	70-130	4.58	25	WG732486
4-Methyl-2-pentanone (MIBK)	ppb	4.00	3.92	107.	51.3-144	1.96	25	WG732486
Acetone	ppb	3.63	3.56	97.0	70-130	1.99	25	WG732486
Allyl chloride	ppb	3.62	3.61	97.0	70-130	0.470	25	WG732486
Benzene	ppb	3.59	3.56	96.0	70-130	0.830	25	WG732486
Benzyl Chloride	ppb	5.30	5.13	141*	70-130	3.30	25	WG732486
Bromodichloromethane	ppb	3.78	3.75	101.	70-130	0.710	25	WG732486
Bromoform	ppb	4.12	4.00	110.	70-130	2.96	25	WG732486
Bromomethane	ppb	3.97	3.90	106.	70-130	1.75	25	WG732486
Carbon disulfide	ppb	3.75	3.77	100.	70-130	0.620	25	WG732486
Carbon tetrachloride	ppb	3.94	3.88	105.	70-130	1.54	25	WG732486
Chlorobenzene	ppb	3.91	3.85	104.	70-130	1.48	25	WG732486
Dibromochloromethane	ppb	4.14	4.06	110.	70-130	1.74	25	WG732486
Chloroethane	ppb	3.70	3.62	99.0	70-130	2.22	25	WG732486
Chloroform	ppb	3.79	3.76	101.	70-130	0.810	25	WG732486
Chloromethane	ppb	3.89	3.92	104.	70-130	0.900	25	WG732486
cis-1,2-Dichloroethene	ppb	3.72	3.69	99.0	70-130	0.760	25	WG732486
cis-1,3-Dichloropropene	ppb	3.92	3.82	105.	70-130	2.62	25	WG732486
Cyclohexane	ppb	3.74	3.74	100.	70-130	0.0400	25	WG732486
Dichlorodifluoromethane	ppb	4.28	4.69	114.	70-130	8.96	25	WG732486
Ethanol	ppb	4.34	4.39	116.	52.6-145	1.15	25	WG732486
Ethylbenzene	ppb	3.68	3.65	98.0	70-130	0.930	25	WG732486

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Heptane	ppb	3.53	3.47	94.0	70-130	1.56	25	WG732486
Hexachloro-1,3-butadiene	ppb	4.20	4.05	112.	55.7-144	3.46	25	WG732486
Isopropylbenzene	ppb	3.86	3.72	103.	70-130	3.54	25	WG732486
m&p-Xylene	ppb	7.18	7.05	96.0	70-130	1.79	25	WG732486
Methyl Butyl Ketone	ppb	4.43	4.34	118.	36.5-155	2.24	25	WG732486
Methyl methacrylate	ppb	3.42	3.33	91.0	70-130	2.62	25	WG732486
MTBE	ppb	3.74	3.73	100.	70-130	0.350	25	WG732486
Methylene Chloride	ppb	3.47	3.39	92.0	70-130	2.34	25	WG732486
n-Hexane	ppb	3.61	3.57	96.0	70-130	1.22	25	WG732486
Naphthalene	ppb	4.70	4.60	125.	53.4-158	2.14	25	WG732486
o-Xylene	ppb	3.70	3.64	99.0	70-130	1.66	25	WG732486
Propene	ppb	3.89	3.85	104.	70-130	1.07	25	WG732486
Styrene	ppb	3.93	3.83	105.	70-130	2.57	25	WG732486
Tetrachloroethylene	ppb	3.84	3.80	102.	70-130	0.960	25	WG732486
Tetrahydrofuran	ppb	3.90	3.83	104.	70-130	1.82	25	WG732486
Toluene	ppb	3.74	3.73	100.	70-130	0.270	25	WG732486
trans-1,2-Dichloroethene	ppb	3.72	3.70	99.0	70-130	0.360	25	WG732486
trans-1,3-Dichloropropene	ppb	4.03	3.97	108.	70-130	1.46	25	WG732486
Trichloroethylene	ppb	3.65	3.61	97.0	70-130	0.940	25	WG732486
Trichlorofluoromethane	ppb	3.76	3.69	100.	70-130	1.77	25	WG732486
Vinyl acetate	ppb	3.88	3.73	103.	70-130	3.89	25	WG732486
Vinyl Bromide	ppb	3.85	3.76	103.	70-130	2.34	25	WG732486
Vinyl chloride	ppb	3.89	3.95	104.	70-130	1.55	25	WG732486
1,4-Bromofluorobenzene				102.0	60-140			WG732486
Acetone	ppb	4.01	3.78	107.	70-130	5.85	25	WG732659
cis-1,2-Dichloroethene	ppb	3.54	3.46	94.0	70-130	2.33	25	WG732659
m&p-Xylene	ppb	7.25	6.95	97.0	70-130	4.27	25	WG732659
o-Xylene	ppb	3.72	3.57	99.0	70-130	4.22	25	WG732659
Tetrachloroethylene	ppb	3.52	3.39	94.0	70-130	3.70	25	WG732659
Trichloroethylene	ppb	3.54	3.45	94.0	70-130	2.61	25	WG732659
1,4-Bromofluorobenzene				107.0	60-140			WG732659
1,1,1-Trichloroethane	ppb	3.69	3.61	98.0	70-130	2.25	25	WG732671
1,1,2,2-Tetrachloroethane	ppb	3.77	3.70	100.	70-130	1.86	25	WG732671
1,1,2-Trichloroethane	ppb	3.79	3.56	101.	70-130	6.42	25	WG732671
1,1,2-Trichlorotrifluoroethane	ppb	3.89	3.80	104.	70-130	2.42	25	WG732671
1,1-Dichloroethane	ppb	3.81	3.68	102.	70-130	3.50	25	WG732671
1,1-Dichloroethene	ppb	3.62	3.52	96.0	70-130	2.59	25	WG732671
1,2,4-Trichlorobenzene	ppb	3.83	3.91	102.	59.7-155	2.02	25	WG732671
1,2,4-Trimethylbenzene	ppb	3.71	3.66	99.0	70-130	1.53	25	WG732671
1,2-Dibromoethane	ppb	3.82	3.65	102.	70-130	4.52	25	WG732671
1,2-Dichlorobenzene	ppb	3.68	3.61	98.0	70-130	1.91	25	WG732671
1,2-Dichloroethane	ppb	3.36	3.22	90.0	70-130	4.37	25	WG732671
1,2-Dichloropropane	ppb	3.64	3.47	97.0	70-130	4.73	25	WG732671
1,2-Dichlorotetrafluoroethane	ppb	3.04	3.27	81.0	70-130	7.03	25	WG732671
1,3,5-Trimethylbenzene	ppb	3.56	3.80	95.0	70-130	6.43	25	WG732671
1,3-Butadiene	ppb	3.41	3.24	91.0	70-130	5.16	25	WG732671
1,3-Dichlorobenzene	ppb	3.68	3.64	98.0	70-130	1.19	25	WG732671
1,4-Dichlorobenzene	ppb	3.64	3.66	97.0	70-130	0.730	25	WG732671
1,4-Dioxane	ppb	4.17	4.03	111.	70-130	3.46	25	WG732671
2,2,4-Trimethylpentane	ppb	3.81	3.63	102.	70-130	4.92	25	WG732671
2-Butanone (MEK)	ppb	4.19	3.95	112.	70-130	5.99	25	WG732671
2-Chlorotoluene	ppb	3.62	3.54	97.0	70-130	2.24	25	WG732671
2-Propanol	ppb	4.14	3.94	110.	62.2-137	5.07	25	WG732671
4-Ethyltoluene	ppb	3.72	3.65	99.0	70-130	1.83	25	WG732671
4-Methyl-2-pentanone (MIBK)	ppb	3.88	3.71	103.	51.3-144	4.31	25	WG732671

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acetone	ppb	3.72	3.48	99.0	70-130	6.75	25	WG732671
Allyl chloride	ppb	3.65	3.65	97.0	70-130	0.0100	25	WG732671
Benzene	ppb	3.59	3.44	96.0	70-130	4.29	25	WG732671
Benzyl Chloride	ppb	5.13	5.04	137*	70-130	1.80	25	WG732671
Bromodichloromethane	ppb	3.68	3.49	98.0	70-130	5.19	25	WG732671
Bromoform	ppb	3.75	3.65	100.	70-130	2.74	25	WG732671
Bromomethane	ppb	3.91	3.78	104.	70-130	3.36	25	WG732671
Carbon disulfide	ppb	4.10	3.97	109.	70-130	3.24	25	WG732671
Carbon tetrachloride	ppb	3.80	3.65	101.	70-130	4.22	25	WG732671
Chlorobenzene	ppb	3.74	3.54	100.	70-130	5.41	25	WG732671
Dibromochloromethane	ppb	3.93	3.70	105.	70-130	5.98	25	WG732671
Chloroethane	ppb	3.78	3.63	101.	70-130	4.12	25	WG732671
Chloroform	ppb	3.79	3.62	101.	70-130	4.59	25	WG732671
Chloromethane	ppb	3.55	3.35	95.0	70-130	5.90	25	WG732671
cis-1,3-Dichloropropene	ppb	3.95	3.70	105.	70-130	6.72	25	WG732671
Cyclohexane	ppb	3.92	3.76	104.	70-130	4.15	25	WG732671
Dichlorodifluoromethane	ppb	2.31	2.50	62*	70-130	7.79	25	WG732671
Ethanol	ppb	5.02	4.61	134.	52.6-145	8.44	25	WG732671
Ethylbenzene	ppb	3.65	3.47	97.0	70-130	4.98	25	WG732671
Heptane	ppb	3.44	3.27	92.0	70-130	5.17	25	WG732671
Hexachloro-1,3-butadiene	ppb	3.47	3.45	92.0	55.7-144	0.450	25	WG732671
Isopropylbenzene	ppb	3.66	3.60	97.0	70-130	1.47	25	WG732671
m&p-Xylene	ppb	7.07	6.72	94.0	70-130	5.10	25	WG732671
Methyl Butyl Ketone	ppb	4.19	3.95	112.	36.5-155	5.83	25	WG732671
Methyl methacrylate	ppb	3.24	3.08	86.0	70-130	5.20	25	WG732671
MTBE	ppb	3.95	3.72	105.	70-130	5.92	25	WG732671
Methylene Chloride	ppb	3.50	3.37	93.0	70-130	3.77	25	WG732671
n-Hexane	ppb	3.76	3.66	100.	70-130	2.76	25	WG732671
Naphthalene	ppb	4.18	4.25	111.	53.4-158	1.76	25	WG732671
o-Xylene	ppb	3.63	3.52	97.0	70-130	3.01	25	WG732671
Propene	ppb	3.49	3.26	93.0	70-130	7.06	25	WG732671
Styrene	ppb	3.78	3.64	101.	70-130	3.69	25	WG732671
Tetrachloroethylene	ppb	3.51	3.35	94.0	70-130	4.67	25	WG732671
Tetrahydrofuran	ppb	3.89	3.70	104.	70-130	5.03	25	WG732671
Toluene	ppb	3.72	3.51	99.0	70-130	5.62	25	WG732671
trans-1,2-Dichloroethene	ppb	3.78	3.71	101.	70-130	1.91	25	WG732671
trans-1,3-Dichloropropene	ppb	3.91	3.74	104.	70-130	4.40	25	WG732671
Trichlorofluoromethane	ppb	3.63	3.56	97.0	70-130	2.20	25	WG732671
Vinyl acetate	ppb	3.91	3.73	104.	70-130	4.76	25	WG732671
Vinyl Bromide	ppb	4.00	3.87	107.	70-130	3.16	25	WG732671
Vinyl chloride	ppb	3.72	3.49	99.0	70-130	6.42	25	WG732671
1,4-Bromofluorobenzene				99.70	60-140			WG732671
cis-1,2-Dichloroethene	ppb	3.69	3.58	98.0	70-130	3.09	25	WG732843
Tetrachloroethylene	ppb	3.55	3.52	94.0	70-130	0.600	25	WG732843
Trichloroethylene	ppb	3.55	3.50	95.0	70-130	1.42	25	WG732843
1,4-Bromofluorobenzene				107.0	60-140			WG732843

Batch number /Run number / Sample number cross reference

WG732486: R2964890: L709812-01 02 03 04 05 06 07 08 09 10 11 12 13 14
 WG732659: R2965947: L709812-01 02 03 04 05 07 08 09 10 11 12 13 14
 WG732671: R2965994: L709812-15 16
 WG732843: R2966531: L709812-15 16

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
Jason Flowers
1201 3rd Ave, Suite #330
Seattle, WA 98101

Quality Assurance Report
Level II

L709812

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Geosyntec- Seattle, WA

1201 3rd Ave, Suite #330
Seattle, WA 98101

Billing Information:

Accounts Payable- Jason Flowers
1201 3rd Ave., Ste. 330
Seattle, WA 98101

Report to:
Jason Flowers

Email To: JFlowers@Geosyntec.com

Project
Description: **Cascade Air Project**

City/State
Collected: **Fairview, OR**

Phone: **206-496-1450**
Fax:

Client Project #

PN60564514-02

Lab Project #
GEOSYNWA-CASCADE

Collected by (print):
Jason Flowers

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

___ Same Day200%
___ Next Day100%
___ Two Day50%
___ Three Day25%

Date Results Needed

Standard

Email? ___ No **X** Yes

FAX? ___ No ___ Yes

No. of
Cnts

TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	TO-15 Summa											
D-17ds-070714-0hr	Smia	Air		7/7/14	12:02	1	X											
D-17ds-070714-4hr	Smia	Air		7/7/14	3:50PM	1	X											
VW-17d-925-070814-0hr	Smia	Air		7/8/14	9:42	1	X											
VW-17d-925-070814-4hr	Smia	Air		7/8/14	13:15	1	X											
Dup #1 070814	Smia	Air		7/8/14	13:25	1	X											
VW-17d-925-070814-0hr	Smia	Air		7/8/14	14:00	1	X											
VW-17d-750-070814-4hr	Smia	Air		7/8/14	18:00	1	X											
VW-17d-425-070814-0hr	Smia	Air		7/8/14	7:21	1	X											
VW-17d-425-070814-4hr	Smia	Air		7/9/14	11:21	1	X											
MW-17ds-070914-0hr	Smia	Air		7/9/14	13:14	1	X											

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: (30) 1L summa cans, (30) sampling manifolds, (5) tedlar bags

6051 2429 7809

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by: (Signature) <i>Jason Flowers</i>	Date: 7/11/14	Time: 16:00	Received by: (Signature) <i>CPB</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: F (lab use only)
Relinquished by: (Signature) <i>CPB</i>	Date: 7/11/14	Time: 17:00	Received by: (Signature) <i>CPB</i>	Temp: °C Amb Bottles Received: 10 10 10	CDC Seal Intact: ___ Y ___ N ___ NA
Relinquished by: (Signature) <i>CPB</i>	Date:	Time:	Received for lab by: (Signature) <i>CPB</i>	Date: 7/2/14	Time: 0900

15-10630

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **709812**

L034

Acctnum: **GEOSYNWA**

Template: **T95134**

Prelogin: **P473907**

TSR: **358 - Jarred Willis**

PB:

Shipped Via: **FedEX Ground**

Rem./Container: Sample # (lab only)

P473907-01

P473907-02

-03

-04

-05

-06

-07

-08

-09

-10

Geosyntec- Seattle, WA

1201 3rd Ave, Suite #330
Seattle, WA 98101

Billing Information:

Accounts Payable- Jason Flowers
1201 3rd Ave., Ste. 330
Seattle, WA 98101

Report to:
Jason Flowers

Email To: JFlowers@Geosyntec.com

Project
Description: **Cascade Air Project**

City/State
Collected: **Fairview, OR**

Phone: **206-496-1450**
Fax:

Client Project #
PN90564S14-02

Lab Project #
GEOSYNWA-CASCADE

Collected by (print):
Jason Flowers

Site/Facility ID #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
Standard
 Email? No Yes
 FAX? No Yes

Packed on Ice **N X Y**

No. of Cntrs

TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15 Summa												
MW-17d-070914-4hr	Sm	Air		7/9/14	16:45	1	X												
MW-17d-071014-24hr	Sm	Air		7/10/14	15:47	1	X												-11
VW-17d-955-071014-24hr	Sm	Air		7/10/14	16:00	1	X												-12
VW-17d-75-071014-24hr	Sm	Air		7/10/14	16:05	1	X												-13
Dup#2 071014	Sm	Air		7/10/14	16:10	1	X												-14
VW-17d-425-071014-24hr	Sm	Air		7/10/14	16:20	1	X												-15
		Air				1	X												-16
		Air				1	X												
		Air				1	X												
		Air				1	X												

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: (30) 1L summa cans, (30) sampling manifolds, (5) tedlar bags
6051 2429 7783

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 7/11/14	Time: 16:00	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Hold #
Relinquished by: (Signature) <i>[Signature]</i>	Date: 7/11/14	Time: 17:00	Received by: (Signature) <i>[Signature]</i>	Temp: _____ °C Bottles Received: Amb 16	Condition: F (lab use only) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 7/14/14	Time: 0830
				pH Checked:	NCF:
				COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	

Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12085 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **709812**
L033

Acctnum: **GEOSYNWA**
Template: **T95134**
Prelogin: **P473907**
TSR: **358 - Jarred Willis**
PB:
Shipped Via: **FedEX Ground**

Rem./Contaminant	Sample # (lab only)
	-11
	-12
	-13
	-14
	-15
	-16



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

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Jason Flowers
Geosyntec- Seattle, WA
1201 3rd Ave, Suite #330
Seattle, WA 98101

Report Summary

Wednesday July 23, 2014

Report Number: L710384


Samples Received: 07/16/14

Client Project:

Description: Cascade Air Project

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, CAL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project

ESC Sample # : L710384-01

Sample ID : VW-17D-75-071214-72HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/12/14 15:55

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	10.0	24.0	< 10.	< 24.	TO-15	07/21/14	8
Allyl chloride	107-05-1	76.53	1.60	5.00	< 1.6	< 5.0	TO-15	07/21/14	8
Benzene	71-43-2	78.1	1.60	5.10	< 1.6	< 5.1	TO-15	07/21/14	8
Benzyl Chloride	100-44-7	127	1.60	8.30	< 1.6	< 8.3	TO-15	07/21/14	8
Bromodichloromethane	75-27-4	164	1.60	11.0	< 1.6	< 11.	TO-15	07/21/14	8
Bromoform	75-25-2	253	4.80	50.0	< 4.8	< 50.	TO-15	07/21/14	8
Bromomethane	74-83-9	94.9	1.60	6.20	< 1.6	< 6.2	TO-15	07/21/14	8
1,3-Butadiene	106-99-0	54.1	16.0	35.0	< 16.	< 35.	TO-15	07/21/14	8
Carbon disulfide	75-15-0	76.1	1.60	5.00	< 1.6	< 5.0	TO-15	07/21/14	8
Carbon tetrachloride	56-23-5	154	1.60	10.0	< 1.6	< 10.	TO-15	07/21/14	8
Chlorobenzene	108-90-7	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/21/14	8
Chloroethane	75-00-3	64.5	1.60	4.20	< 1.6	< 4.2	TO-15	07/21/14	8
Chloroform	67-66-3	119	1.60	7.80	< 1.6	< 7.8	TO-15	07/21/14	8
Chloromethane	74-87-3	50.5	1.60	3.30	< 1.6	< 3.3	TO-15	07/21/14	8
2-Chlorotoluene	95-49-8	126	1.60	8.20	< 1.6	< 8.2	TO-15	07/21/14	8
Cyclohexane	110-82-7	84.2	1.60	5.50	< 1.6	< 5.5	TO-15	07/21/14	8
Dibromochloromethane	124-48-1	208	1.60	14.0	< 1.6	< 14.	TO-15	07/21/14	8
1,2-Dibromoethane	106-93-4	188	1.60	12.0	< 1.6	< 12.	TO-15	07/21/14	8
1,2-Dichlorobenzene	95-50-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/21/14	8
1,3-Dichlorobenzene	541-73-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/21/14	8
1,4-Dichlorobenzene	106-46-7	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/21/14	8
1,2-Dichloroethane	107-06-2	99	1.60	6.50	< 1.6	< 6.5	TO-15	07/21/14	8
1,1-Dichloroethane	75-34-3	98	1.60	6.40	< 1.6	< 6.4	TO-15	07/21/14	8
1,1-Dichloroethene	75-35-4	96.9	1.60	6.30	1.8	7.1	TO-15	07/21/14	8
cis-1,2-Dichloroethene	156-59-2	96.9	1.60	6.30	69.	270	TO-15	07/21/14	8
trans-1,2-Dichloroethene	156-60-5	96.9	1.60	6.30	2.6	10.	TO-15	07/21/14	8
1,2-Dichloropropane	78-87-5	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/21/14	8
cis-1,3-Dichloropropene	10061-01-5	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/21/14	8
trans-1,3-Dichloropropene	10061-02-6	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/21/14	8
1,4-Dioxane	123-91-1	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/21/14	8
Ethanol	64-17-5	46.1	5.04	9.50	6.0	11.	TO-15	07/21/14	8
Ethylbenzene	100-41-4	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/21/14	8
4-Ethyltoluene	622-96-8	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
Trichlorofluoromethane	75-69-4	137.4	1.60	9.00	2.0	11.	TO-15	07/21/14	8
Dichlorodifluoromethane	75-71-8	120.92	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	1.60	12.0	< 1.6	< 12.	TO-15	07/21/14	8
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.60	11.0	< 1.6	< 11.	TO-15	07/21/14	8
Heptane	142-82-5	100	1.60	6.50	< 1.6	< 6.5	TO-15	07/21/14	8
Hexachloro-1,3-butadiene	87-68-3	261	5.04	54.0	< 5.0	< 54.	TO-15	07/21/14	8
n-Hexane	110-54-3	86.2	1.60	5.60	< 1.6	< 5.6	TO-15	07/21/14	8
Isopropylbenzene	98-82-8	120.2	1.60	7.90	4.6	23.	TO-15	07/21/14	8
Methylene Chloride	75-09-2	84.9	1.60	5.60	< 1.6	< 5.6	TO-15	07/21/14	8
Methyl Butyl Ketone	591-78-6	100	10.0	41.0	< 10.	< 41.	TO-15	07/21/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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Reported: 07/23/14 16:00 Printed: 07/23/14 16:01



12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-071214-72HR
 Collected By : Pat Yadon
 Collection Date : 07/12/14 15:55

ESC Sample # : L710384-01
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	10.0	29.0	< 10.	< 29.	TO-15	07/21/14	8
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	10.0	41.0	< 10.	< 41.	TO-15	07/21/14	8
Methyl methacrylate	80-62-6	100.12	1.60	6.60	< 1.6	< 6.6	TO-15	07/21/14	8
MTBE	1634-04-4	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/21/14	8
Naphthalene	91-20-3	128	5.04	26.0	< 5.0	< 26.	TO-15	07/21/14	8
2-Propanol	67-63-0	60.1	10.0	25.0	< 10.	< 25.	TO-15	07/21/14	8
Propene	115-07-1	42.1	3.20	5.50	< 3.2	< 5.5	TO-15	07/21/14	8
Styrene	100-42-5	104	1.60	6.80	< 1.6	< 6.8	TO-15	07/21/14	8
1,1,2,2-Tetrachloroethane	79-34-5	168	1.60	11.0	< 1.6	< 11.	TO-15	07/21/14	8
Tetrachloroethylene	127-18-4	166	1.60	11.0	100	680	TO-15	07/21/14	8
Tetrahydrofuran	109-99-9	72.1	1.60	4.70	< 1.6	< 4.7	TO-15	07/21/14	8
Toluene	108-88-3	92.1	1.60	6.00	< 1.6	< 6.0	TO-15	07/21/14	8
1,2,4-Trichlorobenzene	120-82-1	181	5.04	37.0	< 5.0	< 37.	TO-15	07/21/14	8
1,1,1-Trichloroethane	71-55-6	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/21/14	8
1,1,2-Trichloroethane	79-00-5	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/21/14	8
Trichloroethylene	79-01-6	131	40.0	210.	1600	8600	TO-15	07/22/14	200
1,2,4-Trimethylbenzene	95-63-6	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
1,3,5-Trimethylbenzene	108-67-8	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
2,2,4-Trimethylpentane	540-84-1	114.22	1.60	7.50	< 1.6	< 7.5	TO-15	07/21/14	8
Vinyl chloride	75-01-4	62.5	1.60	4.10	< 1.6	< 4.1	TO-15	07/21/14	8
Vinyl Bromide	593-60-2	106.95	1.60	7.00	< 1.6	< 7.0	TO-15	07/21/14	8
Vinyl acetate	108-05-4	86.1	1.60	5.60	< 1.6	< 5.6	TO-15	07/21/14	8
m&p-Xylene	1330-20-7	106	3.20	14.0	< 3.2	< 14.	TO-15	07/21/14	8
o-Xylene	95-47-6	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/21/14	8
1,4-Bromofluorobenzene	460-00-4				94.7	% Rec.	TO-15	07/21/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.4-071214-72HR
 Collected By : Pat Yadon
 Collection Date : 07/12/14 16:08

ESC Sample # : L710384-02

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	16.	38.	TO-15	07/21/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/21/14	2
Benzene	71-43-2	78.1	0.400	1.30	7.0	22.	TO-15	07/21/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/21/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/21/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/21/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/21/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/21/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/21/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/21/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/21/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/21/14	2
Chloroform	67-66-3	119	0.400	1.90	0.84	4.1	TO-15	07/21/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.71	1.5	TO-15	07/21/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/21/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	1.0	3.4	TO-15	07/21/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/21/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/21/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/21/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/21/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/21/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/21/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/21/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/21/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	33.	130	TO-15	07/21/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/21/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/21/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/21/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/21/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/21/14	2
Ethanol	64-17-5	46.1	1.26	2.40	7.4	14.	TO-15	07/21/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/21/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/21/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/21/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.61	3.0	TO-15	07/21/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/21/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/21/14	2
Heptane	142-82-5	100	0.400	1.60	0.47	1.9	TO-15	07/21/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/21/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	2.5	8.8	TO-15	07/21/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	3.9	19.	TO-15	07/21/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	0.56	1.9	TO-15	07/21/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/21/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.4-071214-72HR
 Collected By : Pat Yadon
 Collection Date : 07/12/14 16:08

ESC Sample # : L710384-02
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/21/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/21/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/21/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/21/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/21/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/21/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/21/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/21/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/21/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	10.	68.	TO-15	07/21/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/21/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.63	2.4	TO-15	07/21/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/21/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/21/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/21/14	2
Trichloroethylene	79-01-6	131	10.0	54.0	240	1300	TO-15	07/22/14	50
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/21/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/21/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/21/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/21/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/21/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/21/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/21/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/21/14	2
1,4-Bromofluorobenzene	460-00-4				96	% Rec.	TO-15	07/21/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-95.5-071214-72HR
 Collected By : Pat Yadon
 Collection Date : 07/12/14 15:40

ESC Sample # : L710384-03

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	10.0	24.0	30.	71.	TO-15	07/21/14	8
Allyl chloride	107-05-1	76.53	1.60	5.00	< 1.6	< 5.0	TO-15	07/21/14	8
Benzene	71-43-2	78.1	1.60	5.10	< 1.6	< 5.1	TO-15	07/21/14	8
Benzyl Chloride	100-44-7	127	1.60	8.30	< 1.6	< 8.3	TO-15	07/21/14	8
Bromodichloromethane	75-27-4	164	1.60	11.0	< 1.6	< 11.	TO-15	07/21/14	8
Bromoform	75-25-2	253	4.80	50.0	< 4.8	< 50.	TO-15	07/21/14	8
Bromomethane	74-83-9	94.9	1.60	6.20	< 1.6	< 6.2	TO-15	07/21/14	8
1,3-Butadiene	106-99-0	54.1	16.0	35.0	< 16.	< 35.	TO-15	07/21/14	8
Carbon disulfide	75-15-0	76.1	1.60	5.00	< 1.6	< 5.0	TO-15	07/21/14	8
Carbon tetrachloride	56-23-5	154	1.60	10.0	< 1.6	< 10.	TO-15	07/21/14	8
Chlorobenzene	108-90-7	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/21/14	8
Chloroethane	75-00-3	64.5	1.60	4.20	< 1.6	< 4.2	TO-15	07/21/14	8
Chloroform	67-66-3	119	1.60	7.80	< 1.6	< 7.8	TO-15	07/21/14	8
Chloromethane	74-87-3	50.5	1.60	3.30	< 1.6	< 3.3	TO-15	07/21/14	8
2-Chlorotoluene	95-49-8	126	1.60	8.20	< 1.6	< 8.2	TO-15	07/21/14	8
Cyclohexane	110-82-7	84.2	1.60	5.50	< 1.6	< 5.5	TO-15	07/21/14	8
Dibromochloromethane	124-48-1	208	1.60	14.0	< 1.6	< 14.	TO-15	07/21/14	8
1,2-Dibromoethane	106-93-4	188	1.60	12.0	< 1.6	< 12.	TO-15	07/21/14	8
1,2-Dichlorobenzene	95-50-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/21/14	8
1,3-Dichlorobenzene	541-73-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/21/14	8
1,4-Dichlorobenzene	106-46-7	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/21/14	8
1,2-Dichloroethane	107-06-2	99	1.60	6.50	< 1.6	< 6.5	TO-15	07/21/14	8
1,1-Dichloroethane	75-34-3	98	1.60	6.40	< 1.6	< 6.4	TO-15	07/21/14	8
1,1-Dichloroethene	75-35-4	96.9	1.60	6.30	2.2	8.7	TO-15	07/21/14	8
cis-1,2-Dichloroethene	156-59-2	96.9	1.60	6.30	66.	260	TO-15	07/21/14	8
trans-1,2-Dichloroethene	156-60-5	96.9	1.60	6.30	2.4	9.5	TO-15	07/21/14	8
1,2-Dichloropropane	78-87-5	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/21/14	8
cis-1,3-Dichloropropene	10061-01-5	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/21/14	8
trans-1,3-Dichloropropene	10061-02-6	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/21/14	8
1,4-Dioxane	123-91-1	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/21/14	8
Ethanol	64-17-5	46.1	5.04	9.50	7.7	15.	TO-15	07/21/14	8
Ethylbenzene	100-41-4	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/21/14	8
4-Ethyltoluene	622-96-8	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
Trichlorofluoromethane	75-69-4	137.4	1.60	9.00	1.8	10.	TO-15	07/21/14	8
Dichlorodifluoromethane	75-71-8	120.92	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	1.60	12.0	< 1.6	< 12.	TO-15	07/21/14	8
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.60	11.0	< 1.6	< 11.	TO-15	07/21/14	8
Heptane	142-82-5	100	1.60	6.50	< 1.6	< 6.5	TO-15	07/21/14	8
Hexachloro-1,3-butadiene	87-68-3	261	5.04	54.0	< 5.0	< 54.	TO-15	07/21/14	8
n-Hexane	110-54-3	86.2	1.60	5.60	< 1.6	< 5.6	TO-15	07/21/14	8
Isopropylbenzene	98-82-8	120.2	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
Methylene Chloride	75-09-2	84.9	1.60	5.60	< 1.6	< 5.6	TO-15	07/21/14	8
Methyl Butyl Ketone	591-78-6	100	10.0	41.0	< 10.	< 41.	TO-15	07/21/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
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 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-95.5-071214-72HR
 Collected By : Pat Yadon
 Collection Date : 07/12/14 15:40

ESC Sample # : L710384-03
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	10.0	29.0	< 10.	< 29.	TO-15	07/21/14	8
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	10.0	41.0	< 10.	< 41.	TO-15	07/21/14	8
Methyl methacrylate	80-62-6	100.12	1.60	6.60	< 1.6	< 6.6	TO-15	07/21/14	8
MTBE	1634-04-4	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/21/14	8
Naphthalene	91-20-3	128	5.04	26.0	< 5.0	< 26.	TO-15	07/21/14	8
2-Propanol	67-63-0	60.1	10.0	25.0	< 10.	< 25.	TO-15	07/21/14	8
Propene	115-07-1	42.1	3.20	5.50	< 3.2	< 5.5	TO-15	07/21/14	8
Styrene	100-42-5	104	1.60	6.80	< 1.6	< 6.8	TO-15	07/21/14	8
1,1,2,2-Tetrachloroethane	79-34-5	168	1.60	11.0	< 1.6	< 11.	TO-15	07/21/14	8
Tetrachloroethylene	127-18-4	166	1.60	11.0	120	810	TO-15	07/21/14	8
Tetrahydrofuran	109-99-9	72.1	1.60	4.70	< 1.6	< 4.7	TO-15	07/21/14	8
Toluene	108-88-3	92.1	1.60	6.00	< 1.6	< 6.0	TO-15	07/21/14	8
1,2,4-Trichlorobenzene	120-82-1	181	5.04	37.0	< 5.0	< 37.	TO-15	07/21/14	8
1,1,1-Trichloroethane	71-55-6	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/21/14	8
1,1,2-Trichloroethane	79-00-5	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/21/14	8
Trichloroethylene	79-01-6	131	40.0	210.	1900	10000	TO-15	07/22/14	200
1,2,4-Trimethylbenzene	95-63-6	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
1,3,5-Trimethylbenzene	108-67-8	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/21/14	8
2,2,4-Trimethylpentane	540-84-1	114.22	1.60	7.50	< 1.6	< 7.5	TO-15	07/21/14	8
Vinyl chloride	75-01-4	62.5	1.60	4.10	< 1.6	< 4.1	TO-15	07/21/14	8
Vinyl Bromide	593-60-2	106.95	1.60	7.00	< 1.6	< 7.0	TO-15	07/21/14	8
Vinyl acetate	108-05-4	86.1	1.60	5.60	< 1.6	< 5.6	TO-15	07/21/14	8
m&p-Xylene	1330-20-7	106	3.20	14.0	5.3	23.	TO-15	07/21/14	8
o-Xylene	95-47-6	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/21/14	8
1,4-Bromofluorobenzene	460-00-4				95.7	% Rec.	TO-15	07/21/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project

ESC Sample # : L710384-04

Sample ID : MW17DS-071214-72HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/12/14 15:25

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	5.00	12.0	54.	130	TO-15	07/21/14	4
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/21/14	4
Benzene	71-43-2	78.1	3.20	10.0	73.	230	TO-15	07/23/14	16
Benzyl Chloride	100-44-7	127	0.800	4.20	1.5	7.8	TO-15	07/21/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/21/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/21/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/21/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/21/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/21/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/21/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/21/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/21/14	4
Chloroform	67-66-3	119	0.800	3.90	1.3	6.3	TO-15	07/21/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	1.6	3.3	TO-15	07/21/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/21/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/21/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/21/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/21/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/21/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/21/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/21/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/21/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/21/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	2.5	9.9	TO-15	07/21/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	65.	260	TO-15	07/21/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	2.4	9.5	TO-15	07/21/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/21/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/21/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/21/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/21/14	4
Ethanol	64-17-5	46.1	2.52	4.80	6.5	12.	TO-15	07/21/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/21/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/21/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	1.7	9.6	TO-15	07/21/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	< 0.80	< 4.0	TO-15	07/21/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/21/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/21/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/21/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/21/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/21/14	4
Isopropylbenzene	98-82-8	120.2	40.0	200.	44.	220	TO-15	07/22/14	200
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/21/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/21/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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Reported: 07/23/14 16:00 Printed: 07/23/14 16:01



12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 23, 2014

Date Received : July 16, 2014
 Description : Cascade Air Project

ESC Sample # : L710384-04

Sample ID : MW17DS-071214-72HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/12/14 15:25

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	< 5.0	< 15.	TO-15	07/21/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/21/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/21/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/21/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/21/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	< 5.0	< 12.	TO-15	07/21/14	4
Propene	115-07-1	42.1	1.60	2.80	< 1.6	< 2.8	TO-15	07/21/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/21/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/21/14	4
Tetrachloroethylene	127-18-4	166	40.0	270.	47.	320	TO-15	07/22/14	200
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/21/14	4
Toluene	108-88-3	92.1	0.800	3.00	3.1	12.	TO-15	07/21/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/21/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/21/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/21/14	4
Trichloroethylene	79-01-6	131	40.0	210.	510	2700	TO-15	07/22/14	200
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/21/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/21/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/21/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/21/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/21/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/21/14	4
m&p-Xylene	1330-20-7	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/21/14	4
o-Xylene	95-47-6	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/21/14	4
1,4-Bromofluorobenzene	460-00-4				96.5	% Rec.	TO-15	07/21/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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Reported: 07/23/14 16:00 Printed: 07/23/14 16:01

Summary of Remarks For Samples Printed
07/23/14 at 16:01:31

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L710384-01 Account: GEOSYNBSWA Received: 07/16/14 09:00 Due Date: 07/23/14 00:00 RPT Date: 07/23/14 16:00
1L summa and sampling manifold
Sample: L710384-02 Account: GEOSYNBSWA Received: 07/16/14 09:00 Due Date: 07/23/14 00:00 RPT Date: 07/23/14 16:00
1L summa and sampling manifold
Sample: L710384-03 Account: GEOSYNBSWA Received: 07/16/14 09:00 Due Date: 07/23/14 00:00 RPT Date: 07/23/14 16:00
1L summa and sampling manifold
Sample: L710384-04 Account: GEOSYNBSWA Received: 07/16/14 09:00 Due Date: 07/23/14 00:00 RPT Date: 07/23/14 16:00
1L summa and sampling manifold



YOUR LAB OF CHOICE

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 Jason Flowers
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Seattle, WA 98101

Quality Assurance Report
 Level II

L710384

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

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July 23, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1-Trichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1,2,2-Tetrachloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1,2-Trichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1-Dichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1-Dichloroethene	< .2	ppb			WG732841	07/21/14 09:44
1,2,4-Trichlorobenzene	< .63	ppb			WG732841	07/21/14 09:44
1,2,4-Trimethylbenzene	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dibromoethane	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichloropropane	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG732841	07/21/14 09:44
1,3,5-Trimethylbenzene	< .2	ppb			WG732841	07/21/14 09:44
1,3-Butadiene	< 2	ppb			WG732841	07/21/14 09:44
1,3-Dichlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
1,4-Dichlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
1,4-Dioxane	< .2	ppb			WG732841	07/21/14 09:44
2,2,4-Trimethylpentane	< .2	ppb			WG732841	07/21/14 09:44
2-Butanone (MEK)	< 1.25	ppb			WG732841	07/21/14 09:44
2-Chlorotoluene	< .2	ppb			WG732841	07/21/14 09:44
2-Propanol	< 1.25	ppb			WG732841	07/21/14 09:44
4-Ethyltoluene	< .2	ppb			WG732841	07/21/14 09:44
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG732841	07/21/14 09:44
Acetone	< 1.25	ppb			WG732841	07/21/14 09:44
Allyl chloride	< .2	ppb			WG732841	07/21/14 09:44
Benzene	< .2	ppb			WG732841	07/21/14 09:44
Benzyl Chloride	< .2	ppb			WG732841	07/21/14 09:44
Bromodichloromethane	< .2	ppb			WG732841	07/21/14 09:44
Bromoform	< .6	ppb			WG732841	07/21/14 09:44
Bromomethane	< .2	ppb			WG732841	07/21/14 09:44
Carbon disulfide	< .2	ppb			WG732841	07/21/14 09:44
Carbon tetrachloride	< .2	ppb			WG732841	07/21/14 09:44
Chlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
Dibromochloromethane	< .2	ppb			WG732841	07/21/14 09:44
Chloroethane	< .2	ppb			WG732841	07/21/14 09:44
Chloroform	< .2	ppb			WG732841	07/21/14 09:44
Chloromethane	< .2	ppb			WG732841	07/21/14 09:44
cis-1,2-Dichloroethene	< .2	ppb			WG732841	07/21/14 09:44
cis-1,3-Dichloropropene	< .2	ppb			WG732841	07/21/14 09:44
Cyclohexane	< .2	ppb			WG732841	07/21/14 09:44
Dichlorodifluoromethane	< .2	ppb			WG732841	07/21/14 09:44
Ethanol	< .63	ppb			WG732841	07/21/14 09:44
Ethylbenzene	< .2	ppb			WG732841	07/21/14 09:44
Heptane	< .2	ppb			WG732841	07/21/14 09:44
Hexachloro-1,3-butadiene	< .63	ppb			WG732841	07/21/14 09:44
Isopropylbenzene	< .2	ppb			WG732841	07/21/14 09:44
m&p-Xylene	< .4	ppb			WG732841	07/21/14 09:44
Methyl Butyl Ketone	< 1.25	ppb			WG732841	07/21/14 09:44
Methyl methacrylate	< .2	ppb			WG732841	07/21/14 09:44
MTBE	< .2	ppb			WG732841	07/21/14 09:44
Methylene Chloride	< .2	ppb			WG732841	07/21/14 09:44
n-Hexane	< .2	ppb			WG732841	07/21/14 09:44
Naphthalene	< .63	ppb			WG732841	07/21/14 09:44
o-Xylene	< .2	ppb			WG732841	07/21/14 09:44
Propene	< .4	ppb			WG732841	07/21/14 09:44
Styrene	< .2	ppb			WG732841	07/21/14 09:44
Tetrachloroethylene	< .2	ppb			WG732841	07/21/14 09:44
Tetrahydrofuran	< .2	ppb			WG732841	07/21/14 09:44

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .2	ppb			WG732841	07/21/14 09:44
trans-1,2-Dichloroethene	< .2	ppb			WG732841	07/21/14 09:44
trans-1,3-Dichloropropene	< .2	ppb			WG732841	07/21/14 09:44
Trichlorofluoromethane	< .2	ppb			WG732841	07/21/14 09:44
Vinyl acetate	< .2	ppb			WG732841	07/21/14 09:44
Vinyl Bromide	< .2	ppb			WG732841	07/21/14 09:44
Vinyl chloride	< .2	ppb			WG732841	07/21/14 09:44
1,4-Bromofluorobenzene		% Rec.	95.00	60-140	WG732841	07/21/14 09:44
Isopropylbenzene	< .2	ppb			WG733187	07/22/14 09:51
Tetrachloroethylene	< .2	ppb			WG733187	07/22/14 09:51
Trichloroethylene	< .2	ppb			WG733187	07/22/14 09:51
1,4-Bromofluorobenzene		% Rec.	96.20	60-140	WG733187	07/22/14 09:51
Benzene	< .2	ppb			WG733383	07/23/14 11:01
1,4-Bromofluorobenzene		% Rec.	96.90	60-140	WG733383	07/23/14 11:01

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	ppb	3.75	3.70	98.6	70-130	WG732841
1,1,2,2-Tetrachloroethane	ppb	3.75	3.36	89.7	70-130	WG732841
1,1,2-Trichloroethane	ppb	3.75	3.48	92.8	70-130	WG732841
1,1,2-Trichlorotrifluoroethane	ppb	3.75	3.59	95.8	70-130	WG732841
1,1-Dichloroethane	ppb	3.75	3.39	90.4	70-130	WG732841
1,1-Dichloroethene	ppb	3.75	3.43	91.5	70-130	WG732841
1,2,4-Trichlorobenzene	ppb	3.75	4.36	116.	59.7-155	WG732841
1,2,4-Trimethylbenzene	ppb	3.75	3.69	98.4	70-130	WG732841
1,2-Dibromoethane	ppb	3.75	3.58	95.5	70-130	WG732841
1,2-Dichlorobenzene	ppb	3.75	3.81	102.	70-130	WG732841
1,2-Dichloroethane	ppb	3.75	3.64	97.1	70-130	WG732841
1,2-Dichloropropane	ppb	3.75	3.11	82.9	70-130	WG732841
1,2-Dichlorotetrafluoroethane	ppb	3.75	3.45	92.1	70-130	WG732841
1,3,5-Trimethylbenzene	ppb	3.75	3.60	96.1	70-130	WG732841
1,3-Butadiene	ppb	3.75	4.17	111.	70-130	WG732841
1,3-Dichlorobenzene	ppb	3.75	3.78	101.	70-130	WG732841
1,4-Dichlorobenzene	ppb	3.75	3.85	103.	70-130	WG732841
1,4-Dioxane	ppb	3.75	4.03	108.	70-130	WG732841
2,2,4-Trimethylpentane	ppb	3.75	3.21	85.6	70-130	WG732841
2-Butanone (MEK)	ppb	3.75	3.46	92.2	70-130	WG732841
2-Chlorotoluene	ppb	3.75	3.70	98.5	70-130	WG732841
2-Propanol	ppb	3.75	3.80	101.	62.2-137	WG732841
4-Ethyltoluene	ppb	3.75	3.59	95.8	70-130	WG732841
4-Methyl-2-pentanone (MIBK)	ppb	3.75	3.49	93.0	51.3-144	WG732841
Acetone	ppb	3.75	3.36	89.7	70-130	WG732841
Allyl chloride	ppb	3.75	3.16	84.2	70-130	WG732841
Benzene	ppb	3.75	3.28	87.4	70-130	WG732841
Benzyl Chloride	ppb	3.75	3.87	103.	70-130	WG732841
Bromodichloromethane	ppb	3.75	3.51	93.5	70-130	WG732841
Bromoform	ppb	3.75	3.88	104.	70-130	WG732841
Bromomethane	ppb	3.75	3.86	103.	70-130	WG732841
Carbon disulfide	ppb	3.75	3.36	89.7	70-130	WG732841
Carbon tetrachloride	ppb	3.75	3.76	100.	70-130	WG732841
Chlorobenzene	ppb	3.75	3.61	96.2	70-130	WG732841
Dibromochloromethane	ppb	3.75	3.70	98.6	70-130	WG732841
Chloroethane	ppb	3.75	3.46	92.2	70-130	WG732841
Chloroform	ppb	3.75	3.54	94.4	70-130	WG732841

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chloromethane	ppb	3.75	3.07	81.8	70-130	WG732841
cis-1,2-Dichloroethene	ppb	3.75	3.36	89.6	70-130	WG732841
cis-1,3-Dichloropropene	ppb	3.75	3.44	91.8	70-130	WG732841
Cyclohexane	ppb	3.75	3.51	93.6	70-130	WG732841
Dichlorodifluoromethane	ppb	3.75	3.22	85.8	70-130	WG732841
Ethanol	ppb	3.75	3.64	97.0	52.6-145	WG732841
Ethylbenzene	ppb	3.75	3.51	93.5	70-130	WG732841
Heptane	ppb	3.75	3.02	80.5	70-130	WG732841
Hexachloro-1,3-butadiene	ppb	3.75	4.47	119.	55.7-144	WG732841
Isopropylbenzene	ppb	3.75	3.53	94.1	70-130	WG732841
m&p-Xylene	ppb	7.5	6.85	91.3	70-130	WG732841
Methyl Butyl Ketone	ppb	3.75	3.59	95.7	36.5-155	WG732841
Methyl methacrylate	ppb	3.75	3.19	85.2	70-130	WG732841
MTBE	ppb	3.75	3.49	93.0	70-130	WG732841
Methylene Chloride	ppb	3.75	3.08	82.1	70-130	WG732841
n-Hexane	ppb	3.75	3.20	85.2	70-130	WG732841
Naphthalene	ppb	3.75	4.31	115.	53.4-158	WG732841
o-Xylene	ppb	3.75	3.44	91.7	70-130	WG732841
Propene	ppb	3.75	2.94	78.3	70-130	WG732841
Styrene	ppb	3.75	3.55	94.7	70-130	WG732841
Tetrachloroethylene	ppb	3.75	3.89	104.	70-130	WG732841
Tetrahydrofuran	ppb	3.75	3.32	88.6	70-130	WG732841
Toluene	ppb	3.75	3.50	93.4	70-130	WG732841
trans-1,2-Dichloroethene	ppb	3.75	3.33	88.8	70-130	WG732841
trans-1,3-Dichloropropene	ppb	3.75	3.55	94.8	70-130	WG732841
Trichlorofluoromethane	ppb	3.75	3.77	100.	70-130	WG732841
Vinyl acetate	ppb	3.75	3.21	85.6	70-130	WG732841
Vinyl Bromide	ppb	3.75	3.61	96.1	70-130	WG732841
Vinyl chloride	ppb	3.75	4.16	111.	70-130	WG732841
1,4-Bromofluorobenzene				95.10	60-140	WG732841
Isopropylbenzene	ppb	3.75	3.50	93.4	70-130	WG733187
Tetrachloroethylene	ppb	3.75	3.81	102.	70-130	WG733187
Trichloroethylene	ppb	3.75	3.44	91.8	70-130	WG733187
1,4-Bromofluorobenzene				97.40	60-140	WG733187
Benzene	ppb	3.75	3.26	87.0	70-130	WG733383
1,4-Bromofluorobenzene				98.50	60-140	WG733383

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1,1-Trichloroethane	ppb	3.61	3.70	96.0	70-130	2.36	25	WG732841
1,1,2,2-Tetrachloroethane	ppb	3.38	3.36	90.0	70-130	0.520	25	WG732841
1,1,2-Trichloroethane	ppb	3.42	3.48	91.0	70-130	1.80	25	WG732841
1,1,2-Trichlorotrifluoroethane	ppb	3.51	3.59	93.0	70-130	2.48	25	WG732841
1,1-Dichloroethane	ppb	3.23	3.39	86.0	70-130	4.68	25	WG732841
1,1-Dichloroethene	ppb	3.29	3.43	88.0	70-130	4.15	25	WG732841
1,2,4-Trichlorobenzene	ppb	4.55	4.36	121.	59.7-155	4.27	25	WG732841
1,2,4-Trimethylbenzene	ppb	3.73	3.69	99.0	70-130	1.12	25	WG732841
1,2-Dibromoethane	ppb	3.58	3.58	96.0	70-130	0.0900	25	WG732841
1,2-Dichlorobenzene	ppb	3.86	3.81	103.	70-130	1.08	25	WG732841
1,2-Dichloroethane	ppb	3.63	3.64	97.0	70-130	0.250	25	WG732841
1,2-Dichloropropane	ppb	3.20	3.11	85.0	70-130	2.94	25	WG732841
1,2-Dichlorotetrafluoroethane	ppb	3.36	3.45	90.0	70-130	2.80	25	WG732841
1,3,5-Trimethylbenzene	ppb	3.65	3.60	97.0	70-130	1.24	25	WG732841
1,3-Butadiene	ppb	4.14	4.17	110.	70-130	0.720	25	WG732841

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
 Jason Flowers
 1201 3rd Ave, Suite #330

Seattle, WA 98101

Quality Assurance Report
 Level II

L710384

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 23, 2014

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,3-Dichlorobenzene	ppb	3.86	3.78	103.	70-130	2.15	25	WG732841
1,4-Dichlorobenzene	ppb	3.85	3.85	103.	70-130	0.0300	25	WG732841
1,4-Dioxane	ppb	3.73	4.03	100.	70-130	7.72	25	WG732841
2,2,4-Trimethylpentane	ppb	3.11	3.21	83.0	70-130	3.25	25	WG732841
2-Butanone (MEK)	ppb	3.34	3.46	89.0	70-130	3.50	25	WG732841
2-Chlorotoluene	ppb	3.73	3.70	100.	70-130	0.980	25	WG732841
2-Propanol	ppb	3.63	3.80	97.0	62.2-137	4.47	25	WG732841
4-Ethyltoluene	ppb	3.61	3.59	96.0	70-130	0.440	25	WG732841
4-Methyl-2-pentanone (MIBK)	ppb	3.40	3.49	90.0	51.3-144	2.59	25	WG732841
Acetone	ppb	3.19	3.36	85.0	70-130	5.17	25	WG732841
Allyl chloride	ppb	2.95	3.16	79.0	70-130	6.59	25	WG732841
Benzene	ppb	3.30	3.28	88.0	70-130	0.730	25	WG732841
Benzyl Chloride	ppb	3.94	3.87	105.	70-130	1.86	25	WG732841
Bromodichloromethane	ppb	3.57	3.51	95.0	70-130	1.93	25	WG732841
Bromoform	ppb	3.93	3.88	105.	70-130	1.26	25	WG732841
Bromomethane	ppb	3.77	3.86	100.	70-130	2.24	25	WG732841
Carbon disulfide	ppb	3.16	3.36	84.0	70-130	6.11	25	WG732841
Carbon tetrachloride	ppb	3.65	3.76	97.0	70-130	2.81	25	WG732841
Chlorobenzene	ppb	3.58	3.61	96.0	70-130	0.660	25	WG732841
Dibromochloromethane	ppb	3.74	3.70	100.	70-130	1.03	25	WG732841
Chloroethane	ppb	3.37	3.46	90.0	70-130	2.46	25	WG732841
Chloroform	ppb	3.48	3.54	93.0	70-130	1.62	25	WG732841
Chloromethane	ppb	3.03	3.07	81.0	70-130	1.27	25	WG732841
cis-1,2-Dichloroethene	ppb	3.30	3.36	88.0	70-130	1.78	25	WG732841
cis-1,3-Dichloropropene	ppb	3.37	3.44	90.0	70-130	1.96	25	WG732841
Cyclohexane	ppb	3.40	3.51	91.0	70-130	3.26	25	WG732841
Dichlorodifluoromethane	ppb	3.13	3.22	83.0	70-130	2.76	25	WG732841
Ethanol	ppb	3.46	3.64	92.0	52.6-145	5.06	25	WG732841
Ethylbenzene	ppb	3.56	3.51	95.0	70-130	1.41	25	WG732841
Heptane	ppb	3.11	3.02	83.0	70-130	3.03	25	WG732841
Hexachloro-1,3-butadiene	ppb	4.44	4.47	118.	55.7-144	0.730	25	WG732841
Isopropylbenzene	ppb	3.49	3.53	93.0	70-130	1.15	25	WG732841
m&p-Xylene	ppb	6.90	6.85	92.0	70-130	0.790	25	WG732841
Methyl Butyl Ketone	ppb	3.60	3.59	96.0	36.5-155	0.220	25	WG732841
Methyl methacrylate	ppb	3.20	3.19	85.0	70-130	0.160	25	WG732841
MTBE	ppb	3.43	3.49	92.0	70-130	1.53	25	WG732841
Methylene Chloride	ppb	2.89	3.08	77.0	70-130	6.12	25	WG732841
n-Hexane	ppb	3.10	3.20	83.0	70-130	2.92	25	WG732841
Naphthalene	ppb	4.31	4.31	115.	53.4-158	0.100	25	WG732841
o-Xylene	ppb	3.47	3.44	92.0	70-130	0.950	25	WG732841
Propene	ppb	2.63	2.94	70.0	70-130	10.9	25	WG732841
Styrene	ppb	3.62	3.55	96.0	70-130	1.94	25	WG732841
Tetrachloroethylene	ppb	3.85	3.89	103.	70-130	0.960	25	WG732841
Tetrahydrofuran	ppb	3.08	3.32	82.0	70-130	7.48	25	WG732841
Toluene	ppb	3.38	3.50	90.0	70-130	3.68	25	WG732841
trans-1,2-Dichloroethene	ppb	3.26	3.33	87.0	70-130	2.03	25	WG732841
trans-1,3-Dichloropropene	ppb	3.48	3.55	93.0	70-130	2.23	25	WG732841
Trichlorofluoromethane	ppb	3.64	3.77	97.0	70-130	3.47	25	WG732841
Vinyl acetate	ppb	3.10	3.21	83.0	70-130	3.54	25	WG732841
Vinyl Bromide	ppb	3.51	3.61	93.0	70-130	2.82	25	WG732841
Vinyl chloride	ppb	3.96	4.16	106.	70-130	4.90	25	WG732841
1,4-Bromofluorobenzene				96.10	60-140			WG732841
Isopropylbenzene	ppb	3.55	3.50	95.0	70-130	1.32	25	WG733187
Tetrachloroethylene	ppb	3.81	3.81	102.	70-130	0.0600	25	WG733187
Trichloroethylene	ppb	3.49	3.44	93.0	70-130	1.25	25	WG733187
1,4-Bromofluorobenzene				97.20	60-140			WG733187

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
Jason Flowers
1201 3rd Ave, Suite #330

Seattle, WA 98101

Quality Assurance Report
Level II

L710384

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 23, 2014

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	ppb	3.20	3.26	85.0	70-130	2.00	25	WG733383
1,4-Bromofluorobenzene				96.90	60-140			WG733383

Batch number /Run number / Sample number cross reference

WG732841: R2967047: L710384-01 02 03 04
WG733187: R2967345: L710384-01 02 03 04
WG733383: R2967577: L710384-04

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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July 23, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Geosyntec- Seattle, WA

1201 3rd Ave, Suite #330
Seattle, WA 98101

Billing Information:

Accounts Payable- Jason Flowers
1201 3rd Ave., Ste. 330
Seattle, WA 98101

Report to:
Jason Flowers

Email To: JFlowers@Geosyntec.com

Project
Description: **Cascade Air Project**

City/State
Collected:

Phone: **206-496-1450**
Fax:

Client Project #

Lab Project #
GEOSYNWA-CASCADE

Collected by (print):
PAT YADON

Site/Facility ID #

P.O. #
PNG-0564 S14-02

Collected by (signature):
Patrick E. Yadon

Rush? (Lab MUST Be Notified)

Date Results Needed
STANDARD

Immediately
Packed on Ice N Y

___ Same Day200%
___ Next Day100%
___ Two Day50%
___ Three Day25%

Email? ___ No Yes
FAX? ___ No ___ Yes

No.
of
Cnts

TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts												
VW-17A-95.5-071214-72HR	5 m:n	Air		7/12/14	15:40	1	X											
VW-17A-75-071214-72HR	5 m:n	Air		7/12/14	15:55	1	X											03
VW-17d-42.4-071214-72HR	5 m:n	Air		7/12/14	16:08	1	X											01
MW17AS-071214-72HR	5 m:n	Air		7/12/14	15:25	1	X											02
		Air				1	X											04
		Air				1	X											
		Air				1	X											
		Air				1	X											
		Air				1	X											
		Air				1	X											

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: (30) 1L summa cans, (30) sampling manifolds, (5) tedlar bags

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>Patrick E. Yadon</i>	Date: 7/15/14	Time: 8:33	Received by: (Signature) <i>R. Ah</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Hold #
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Amb 2	Condition: (lab use only) M
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Bottles Received: 2	COC Seal Intact: ___ Y ___ N ___ NA
				Date: 7/16/14	pH Checked: NCF: 0900

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **C710387**
K239

Acctnum: **GEOSYNWA**
Template: **T95134**
Prelogin: **P475605**
TSR: **358 - Jarred Willis**
PB:

Shipped Via: **FedEX Ground**

Rem./Contaminant	Sample # (lab only)
	03
	01
	02
	04

Geosyntec- Seattle, WA

1201 3rd Ave, Suite #330
Seattle, WA 98101

Billing Information:

Accounts Payable- Jason Flowers
1201 3rd Ave., Ste. 330
Seattle, WA 98101

Report to:
Jason Flowers

Email To: JFlowers@Geosyntec.com

Project
Description: **Cascade Air Project**

City/State
Collected:

Phone: **206-496-1450**
Fax:

Client Project #

Lab Project #
GEOSYNWA-CASCADE

Collected by (print):
PAT YADON

Site/Facility ID #

P.O. #
PNG-0564 S14-02

Collected by (signature):
Patrick E. Yadon

Rush? (Lab MUST Be Notified)

Date Results Needed

___ Same Day200%
___ Next Day100%
___ Two Day50%
___ Three Day25%

STANDARD

Email? ___ No **X** Yes

FAX? ___ No ___ Yes

No.
of
Cnts

TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
VW-17A-95.5-071214-72HR	5 m:n	Air		7/12/14	15:40	1
VW-17A-75-071214-72HR	5 m:n	Air		7/12/14	15:55	1
VW-17d-42.4-071214-72HR	5 m:n	Air		7/12/14	16:08	1
MW17AS-071214-72HR	5 m:n	Air		7/12/14	15:25	1
		Air				1
		Air				1
		Air				1
		Air				1
		Air				1
		Air				1
		Air				1

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



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L# **C710387**

K239

Acctnum: **GEOSYNWA**

Template: **T95134**

Prelogin: **P475605**

TSR: **358 - Jarred Willis**

PB:

Shipped Via: **FedEX Ground**

Rem./Contaminant Sample # (lab only)

03
01
02
04

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other

Remarks: **(30) 1L summa cans, (30) sampling manifolds, (5) tedlar bags**

pH _____ Temp _____

Flow _____ Other _____

Hold # _____

Relinquished by: (Signature)

Date: **7/15/14**

Time: **8:33**

Received by: (Signature)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Samples returned via: UPS

FedEx Courier _____

Temp: _____ °C Bottles Received:

AMP 2

Date: **7/16/14** Time: **0900**

Condition: (lab use only)

COC Seal Intact: ___ Y ___ N ___ NA

pH Checked: _____ NCF: _____

605124306174

MJ



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Jason Flowers
Geosyntec- Seattle, WA
1201 3rd Ave, Suite #330
Seattle, WA 98101

Report Summary

Thursday July 24, 2014

Report Number: L710967


Samples Received: 07/18/14

Client Project:

Description: Cascade Air Project

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, CAL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : MW-17DS-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 16:15

ESC Sample # : L710967-01

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	21.	50.	TO-15	07/22/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/22/14	2
Benzene	71-43-2	78.1	0.400	1.30	1.2	3.8	TO-15	07/22/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/22/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/22/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/22/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/22/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/22/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/22/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/22/14	2
Chloroform	67-66-3	119	0.400	1.90	0.64	3.1	TO-15	07/22/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/22/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/22/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/22/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/22/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/22/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/22/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/22/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	1.3	5.2	TO-15	07/22/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	30.	120	TO-15	07/22/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	1.1	4.4	TO-15	07/22/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Ethanol	64-17-5	46.1	1.26	2.40	9.4	18.	TO-15	07/22/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/22/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	0.99	5.6	TO-15	07/22/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.59	2.9	TO-15	07/22/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/22/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/22/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/22/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	2.4	8.5	TO-15	07/22/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	10.	49.	TO-15	07/22/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	0.77	2.7	TO-15	07/22/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/22/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Mt. Juliet, TN 37122
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 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : MW-17DS-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 16:15

ESC Sample # : L710967-01
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/22/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/22/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/22/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/22/14	2
Propene	115-07-1	42.1	0.800	1.40	0.82	1.4	TO-15	07/22/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/22/14	2
Tetrachloroethylene	127-18-4	166	16.0	110.	56.	380	TO-15	07/22/14	80
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/22/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.96	3.6	TO-15	07/22/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/22/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/22/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/22/14	2
Trichloroethylene	79-01-6	131	16.0	86.0	680	3600	TO-15	07/22/14	80
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/22/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/22/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/22/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/22/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/22/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
1,4-Bromofluorobenzene	460-00-4				95.2	% Rec.	TO-15	07/22/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-95.5-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 16:33

ESC Sample # : L710967-02
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	10.0	24.0	18.	43.	TO-15	07/22/14	8
Allyl chloride	107-05-1	76.53	1.60	5.00	< 1.6	< 5.0	TO-15	07/22/14	8
Benzene	71-43-2	78.1	1.60	5.10	< 1.6	< 5.1	TO-15	07/22/14	8
Benzyl Chloride	100-44-7	127	1.60	8.30	< 1.6	< 8.3	TO-15	07/22/14	8
Bromodichloromethane	75-27-4	164	1.60	11.0	< 1.6	< 11.	TO-15	07/22/14	8
Bromoform	75-25-2	253	4.80	50.0	< 4.8	< 50.	TO-15	07/22/14	8
Bromomethane	74-83-9	94.9	1.60	6.20	< 1.6	< 6.2	TO-15	07/22/14	8
1,3-Butadiene	106-99-0	54.1	16.0	35.0	< 16.	< 35.	TO-15	07/22/14	8
Carbon disulfide	75-15-0	76.1	1.60	5.00	< 1.6	< 5.0	TO-15	07/22/14	8
Carbon tetrachloride	56-23-5	154	1.60	10.0	< 1.6	< 10.	TO-15	07/22/14	8
Chlorobenzene	108-90-7	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/22/14	8
Chloroethane	75-00-3	64.5	1.60	4.20	< 1.6	< 4.2	TO-15	07/22/14	8
Chloroform	67-66-3	119	1.60	7.80	2.0	9.7	TO-15	07/22/14	8
Chloromethane	74-87-3	50.5	1.60	3.30	< 1.6	< 3.3	TO-15	07/22/14	8
2-Chlorotoluene	95-49-8	126	1.60	8.20	< 1.6	< 8.2	TO-15	07/22/14	8
Cyclohexane	110-82-7	84.2	1.60	5.50	< 1.6	< 5.5	TO-15	07/22/14	8
Dibromochloromethane	124-48-1	208	1.60	14.0	< 1.6	< 14.	TO-15	07/22/14	8
1,2-Dibromoethane	106-93-4	188	1.60	12.0	< 1.6	< 12.	TO-15	07/22/14	8
1,2-Dichlorobenzene	95-50-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/22/14	8
1,3-Dichlorobenzene	541-73-1	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/22/14	8
1,4-Dichlorobenzene	106-46-7	147	1.60	9.60	< 1.6	< 9.6	TO-15	07/22/14	8
1,2-Dichloroethane	107-06-2	99	1.60	6.50	< 1.6	< 6.5	TO-15	07/22/14	8
1,1-Dichloroethane	75-34-3	98	1.60	6.40	< 1.6	< 6.4	TO-15	07/22/14	8
1,1-Dichloroethene	75-35-4	96.9	1.60	6.30	3.1	12.	TO-15	07/22/14	8
cis-1,2-Dichloroethene	156-59-2	96.9	1.60	6.30	180	710	TO-15	07/22/14	8
trans-1,2-Dichloroethene	156-60-5	96.9	1.60	6.30	4.6	18.	TO-15	07/22/14	8
1,2-Dichloropropane	78-87-5	113	1.60	7.40	< 1.6	< 7.4	TO-15	07/22/14	8
cis-1,3-Dichloropropene	10061-01-5	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/22/14	8
trans-1,3-Dichloropropene	10061-02-6	111	1.60	7.30	< 1.6	< 7.3	TO-15	07/22/14	8
1,4-Dioxane	123-91-1	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/22/14	8
Ethanol	64-17-5	46.1	5.04	9.50	5.6	11.	TO-15	07/22/14	8
Ethylbenzene	100-41-4	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/22/14	8
4-Ethyltoluene	622-96-8	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/22/14	8
Trichlorofluoromethane	75-69-4	137.4	1.60	9.00	2.6	15.	TO-15	07/22/14	8
Dichlorodifluoromethane	75-71-8	120.92	1.60	7.90	< 1.6	< 7.9	TO-15	07/22/14	8
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	1.60	12.0	< 1.6	< 12.	TO-15	07/22/14	8
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.60	11.0	< 1.6	< 11.	TO-15	07/22/14	8
Heptane	142-82-5	100	1.60	6.50	< 1.6	< 6.5	TO-15	07/22/14	8
Hexachloro-1,3-butadiene	87-68-3	261	5.04	54.0	< 5.0	< 54.	TO-15	07/22/14	8
n-Hexane	110-54-3	86.2	1.60	5.60	< 1.6	< 5.6	TO-15	07/22/14	8
Isopropylbenzene	98-82-8	120.2	1.60	7.90	< 1.6	< 7.9	TO-15	07/22/14	8
Methylene Chloride	75-09-2	84.9	1.60	5.60	< 1.6	< 5.6	TO-15	07/22/14	8
Methyl Butyl Ketone	591-78-6	100	10.0	41.0	< 10.	< 41.	TO-15	07/22/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-95.5-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 16:33

ESC Sample # : L710967-02
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	10.0	29.0	< 10.	< 29.	TO-15	07/22/14	8
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	10.0	41.0	< 10.	< 41.	TO-15	07/22/14	8
Methyl methacrylate	80-62-6	100.12	1.60	6.60	< 1.6	< 6.6	TO-15	07/22/14	8
MTBE	1634-04-4	88.1	1.60	5.80	< 1.6	< 5.8	TO-15	07/22/14	8
Naphthalene	91-20-3	128	5.04	26.0	< 5.0	< 26.	TO-15	07/22/14	8
2-Propanol	67-63-0	60.1	10.0	25.0	< 10.	< 25.	TO-15	07/22/14	8
Propene	115-07-1	42.1	3.20	5.50	< 3.2	< 5.5	TO-15	07/22/14	8
Styrene	100-42-5	104	1.60	6.80	< 1.6	< 6.8	TO-15	07/22/14	8
1,1,2,2-Tetrachloroethane	79-34-5	168	1.60	11.0	< 1.6	< 11.	TO-15	07/22/14	8
Tetrachloroethylene	127-18-4	166	1.60	11.0	150	1000	TO-15	07/22/14	8
Tetrahydrofuran	109-99-9	72.1	1.60	4.70	< 1.6	< 4.7	TO-15	07/22/14	8
Toluene	108-88-3	92.1	1.60	6.00	< 1.6	< 6.0	TO-15	07/22/14	8
1,2,4-Trichlorobenzene	120-82-1	181	5.04	37.0	< 5.0	< 37.	TO-15	07/22/14	8
1,1,1-Trichloroethane	71-55-6	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/22/14	8
1,1,2-Trichloroethane	79-00-5	133	1.60	8.70	< 1.6	< 8.7	TO-15	07/22/14	8
Trichloroethylene	79-01-6	131	100.	540.	1400	7500	TO-15	07/23/14	500
1,2,4-Trimethylbenzene	95-63-6	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/22/14	8
1,3,5-Trimethylbenzene	108-67-8	120	1.60	7.90	< 1.6	< 7.9	TO-15	07/22/14	8
2,2,4-Trimethylpentane	540-84-1	114.22	1.60	7.50	< 1.6	< 7.5	TO-15	07/22/14	8
Vinyl chloride	75-01-4	62.5	1.60	4.10	< 1.6	< 4.1	TO-15	07/22/14	8
Vinyl Bromide	593-60-2	106.95	1.60	7.00	< 1.6	< 7.0	TO-15	07/22/14	8
Vinyl acetate	108-05-4	86.1	1.60	5.60	< 1.6	< 5.6	TO-15	07/22/14	8
m&p-Xylene	1330-20-7	106	3.20	14.0	5.8	25.	TO-15	07/22/14	8
o-Xylene	95-47-6	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/22/14	8
1,4-Bromofluorobenzene	460-00-4				99.7	% Rec.	TO-15	07/22/14	8

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 (615) 758-5858
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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 16:45

ESC Sample # : L710967-03

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	5.00	12.0	14.	33.	TO-15	07/22/14	4
Allyl chloride	107-05-1	76.53	0.800	2.50	< 0.80	< 2.5	TO-15	07/22/14	4
Benzene	71-43-2	78.1	0.800	2.60	< 0.80	< 2.6	TO-15	07/22/14	4
Benzyl Chloride	100-44-7	127	0.800	4.20	< 0.80	< 4.2	TO-15	07/22/14	4
Bromodichloromethane	75-27-4	164	0.800	5.40	< 0.80	< 5.4	TO-15	07/22/14	4
Bromoform	75-25-2	253	2.40	25.0	< 2.4	< 25.	TO-15	07/22/14	4
Bromomethane	74-83-9	94.9	0.800	3.10	< 0.80	< 3.1	TO-15	07/22/14	4
1,3-Butadiene	106-99-0	54.1	8.00	18.0	< 8.0	< 18.	TO-15	07/22/14	4
Carbon disulfide	75-15-0	76.1	0.800	2.50	< 0.80	< 2.5	TO-15	07/22/14	4
Carbon tetrachloride	56-23-5	154	0.800	5.00	< 0.80	< 5.0	TO-15	07/22/14	4
Chlorobenzene	108-90-7	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/22/14	4
Chloroethane	75-00-3	64.5	0.800	2.10	< 0.80	< 2.1	TO-15	07/22/14	4
Chloroform	67-66-3	119	0.800	3.90	2.0	9.7	TO-15	07/22/14	4
Chloromethane	74-87-3	50.5	0.800	1.70	< 0.80	< 1.7	TO-15	07/22/14	4
2-Chlorotoluene	95-49-8	126	0.800	4.10	< 0.80	< 4.1	TO-15	07/22/14	4
Cyclohexane	110-82-7	84.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/22/14	4
Dibromochloromethane	124-48-1	208	0.800	6.80	< 0.80	< 6.8	TO-15	07/22/14	4
1,2-Dibromoethane	106-93-4	188	0.800	6.20	< 0.80	< 6.2	TO-15	07/22/14	4
1,2-Dichlorobenzene	95-50-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/22/14	4
1,3-Dichlorobenzene	541-73-1	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/22/14	4
1,4-Dichlorobenzene	106-46-7	147	0.800	4.80	< 0.80	< 4.8	TO-15	07/22/14	4
1,2-Dichloroethane	107-06-2	99	0.800	3.20	< 0.80	< 3.2	TO-15	07/22/14	4
1,1-Dichloroethane	75-34-3	98	0.800	3.20	< 0.80	< 3.2	TO-15	07/22/14	4
1,1-Dichloroethene	75-35-4	96.9	0.800	3.20	1.3	5.2	TO-15	07/22/14	4
cis-1,2-Dichloroethene	156-59-2	96.9	0.800	3.20	130	520	TO-15	07/22/14	4
trans-1,2-Dichloroethene	156-60-5	96.9	0.800	3.20	3.8	15.	TO-15	07/22/14	4
1,2-Dichloropropane	78-87-5	113	0.800	3.70	< 0.80	< 3.7	TO-15	07/22/14	4
cis-1,3-Dichloropropene	10061-01-5	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/22/14	4
trans-1,3-Dichloropropene	10061-02-6	111	0.800	3.60	< 0.80	< 3.6	TO-15	07/22/14	4
1,4-Dioxane	123-91-1	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/22/14	4
Ethanol	64-17-5	46.1	2.52	4.80	31.	58.	TO-15	07/22/14	4
Ethylbenzene	100-41-4	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/22/14	4
4-Ethyltoluene	622-96-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/22/14	4
Trichlorofluoromethane	75-69-4	137.4	0.800	4.50	2.3	13.	TO-15	07/22/14	4
Dichlorodifluoromethane	75-71-8	120.92	0.800	4.00	0.94	4.6	TO-15	07/22/14	4
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.800	6.10	< 0.80	< 6.1	TO-15	07/22/14	4
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.800	5.60	< 0.80	< 5.6	TO-15	07/22/14	4
Heptane	142-82-5	100	0.800	3.30	< 0.80	< 3.3	TO-15	07/22/14	4
Hexachloro-1,3-butadiene	87-68-3	261	2.52	27.0	< 2.5	< 27.	TO-15	07/22/14	4
n-Hexane	110-54-3	86.2	0.800	2.80	< 0.80	< 2.8	TO-15	07/22/14	4
Isopropylbenzene	98-82-8	120.2	0.800	3.90	< 0.80	< 3.9	TO-15	07/22/14	4
Methylene Chloride	75-09-2	84.9	0.800	2.80	< 0.80	< 2.8	TO-15	07/22/14	4
Methyl Butyl Ketone	591-78-6	100	5.00	20.0	< 5.0	< 20.	TO-15	07/22/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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 Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 16:45

ESC Sample # : L710967-03
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	5.00	15.0	< 5.0	< 15.	TO-15	07/22/14	4
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	5.00	20.0	< 5.0	< 20.	TO-15	07/22/14	4
Methyl methacrylate	80-62-6	100.12	0.800	3.30	< 0.80	< 3.3	TO-15	07/22/14	4
MTBE	1634-04-4	88.1	0.800	2.90	< 0.80	< 2.9	TO-15	07/22/14	4
Naphthalene	91-20-3	128	2.52	13.0	< 2.5	< 13.	TO-15	07/22/14	4
2-Propanol	67-63-0	60.1	5.00	12.0	5.9	15.	TO-15	07/22/14	4
Propene	115-07-1	42.1	1.60	2.80	< 1.6	< 2.8	TO-15	07/22/14	4
Styrene	100-42-5	104	0.800	3.40	< 0.80	< 3.4	TO-15	07/22/14	4
1,1,2,2-Tetrachloroethane	79-34-5	168	0.800	5.50	< 0.80	< 5.5	TO-15	07/22/14	4
Tetrachloroethylene	127-18-4	166	0.800	5.40	78.	530	TO-15	07/22/14	4
Tetrahydrofuran	109-99-9	72.1	0.800	2.40	< 0.80	< 2.4	TO-15	07/22/14	4
Toluene	108-88-3	92.1	0.800	3.00	9.9	37.	TO-15	07/22/14	4
1,2,4-Trichlorobenzene	120-82-1	181	2.52	19.0	< 2.5	< 19.	TO-15	07/22/14	4
1,1,1-Trichloroethane	71-55-6	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/22/14	4
1,1,2-Trichloroethane	79-00-5	133	0.800	4.40	< 0.80	< 4.4	TO-15	07/22/14	4
Trichloroethylene	79-01-6	131	50.0	270.	830	4400	TO-15	07/23/14	250
1,2,4-Trimethylbenzene	95-63-6	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/22/14	4
1,3,5-Trimethylbenzene	108-67-8	120	0.800	3.90	< 0.80	< 3.9	TO-15	07/22/14	4
2,2,4-Trimethylpentane	540-84-1	114.22	0.800	3.70	< 0.80	< 3.7	TO-15	07/22/14	4
Vinyl chloride	75-01-4	62.5	0.800	2.00	< 0.80	< 2.0	TO-15	07/22/14	4
Vinyl Bromide	593-60-2	106.95	0.800	3.50	< 0.80	< 3.5	TO-15	07/22/14	4
Vinyl acetate	108-05-4	86.1	0.800	2.80	< 0.80	< 2.8	TO-15	07/22/14	4
m&p-Xylene	1330-20-7	106	1.60	6.90	< 1.6	< 6.9	TO-15	07/22/14	4
o-Xylene	95-47-6	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/22/14	4
1,4-Bromofluorobenzene	460-00-4				105	% Rec.	TO-15	07/22/14	4

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Mt. Juliet, TN 37122
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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 17:00

ESC Sample # : L710967-04
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	26.	62.	TO-15	07/22/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/22/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/22/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/22/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/22/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/22/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/22/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/22/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/22/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/22/14	2
Chloroform	67-66-3	119	0.400	1.90	1.6	7.8	TO-15	07/22/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/22/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/22/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/22/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/22/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/22/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/22/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/22/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	16.0	63.0	41.	160	TO-15	07/22/14	80
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/22/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Ethanol	64-17-5	46.1	1.26	2.40	4.9	9.2	TO-15	07/22/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/22/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/22/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	1.2	5.9	TO-15	07/22/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/22/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/22/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/22/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	1.1	5.4	TO-15	07/22/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/22/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

July 24, 2014

Date Received : July 18, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-071614-168HR
 Collected By : Pat Yadon
 Collection Date : 07/16/14 17:00

ESC Sample # : L710967-04
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	4.4	13.	TO-15	07/22/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/22/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/22/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/22/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	14.	34.	TO-15	07/22/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/22/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/22/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	17.	120	TO-15	07/22/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/22/14	2
Toluene	108-88-3	92.1	0.400	1.50	1.2	4.5	TO-15	07/22/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/22/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/22/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/22/14	2
Trichloroethylene	79-01-6	131	16.0	86.0	200	1100	TO-15	07/23/14	80
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/22/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/22/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/22/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/22/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/22/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/22/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/22/14	2
1,4-Bromofluorobenzene	460-00-4				113	% Rec.	TO-15	07/22/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L710967-02	WG732839	SAMP	Benzyl Chloride	R2966767	L1
	WG732839	SAMP	Dichlorodifluoromethane	R2966767	J3
L710967-03	WG733105	SAMP	Benzyl Chloride	R2967287	L1
	WG733105	SAMP	Dichlorodifluoromethane	R2967287	J4
L710967-04	WG733105	SAMP	Benzyl Chloride	R2967287	L1
	WG733105	SAMP	Dichlorodifluoromethane	R2967287	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
L1	(ESC) The associated batch LCS exceeded the upper control limit, which indicates a high bias; The sample analyte was "not detected" and is therefore unaffected.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
07/24/14 at 09:12:01

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L710967-01 Account: GEOSYNBSWA Received: 07/18/14 09:00 Due Date: 07/25/14 00:00 RPT Date: 07/24/14 09:11
1L summa and sampling manifold
Sample: L710967-02 Account: GEOSYNBSWA Received: 07/18/14 09:00 Due Date: 07/25/14 00:00 RPT Date: 07/24/14 09:11
1L summa and sampling manifold
Sample: L710967-03 Account: GEOSYNBSWA Received: 07/18/14 09:00 Due Date: 07/25/14 00:00 RPT Date: 07/24/14 09:11
1L summa and sampling manifold
Sample: L710967-04 Account: GEOSYNBSWA Received: 07/18/14 09:00 Due Date: 07/25/14 00:00 RPT Date: 07/24/14 09:11
1L summa and sampling manifold



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
 Jason Flowers
 1201 3rd Ave, Suite #330

Seattle, WA 98101

Quality Assurance Report
 Level II

L710967

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 24, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1-Trichloroethane	< .2	ppb			WG732839	07/21/14 12:13
1,1,2,2-Tetrachloroethane	< .2	ppb			WG732839	07/21/14 12:13
1,1,2-Trichloroethane	< .2	ppb			WG732839	07/21/14 12:13
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG732839	07/21/14 12:13
1,1-Dichloroethane	< .2	ppb			WG732839	07/21/14 12:13
1,1-Dichloroethene	< .2	ppb			WG732839	07/21/14 12:13
1,2,4-Trichlorobenzene	< .63	ppb			WG732839	07/21/14 12:13
1,2,4-Trimethylbenzene	< .2	ppb			WG732839	07/21/14 12:13
1,2-Dibromoethane	< .2	ppb			WG732839	07/21/14 12:13
1,2-Dichlorobenzene	< .2	ppb			WG732839	07/21/14 12:13
1,2-Dichloroethane	< .2	ppb			WG732839	07/21/14 12:13
1,2-Dichloropropane	< .2	ppb			WG732839	07/21/14 12:13
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG732839	07/21/14 12:13
1,3,5-Trimethylbenzene	< .2	ppb			WG732839	07/21/14 12:13
1,3-Butadiene	< 2	ppb			WG732839	07/21/14 12:13
1,3-Dichlorobenzene	< .2	ppb			WG732839	07/21/14 12:13
1,4-Dichlorobenzene	< .2	ppb			WG732839	07/21/14 12:13
1,4-Dioxane	< .2	ppb			WG732839	07/21/14 12:13
2,2,4-Trimethylpentane	< .2	ppb			WG732839	07/21/14 12:13
2-Butanone (MEK)	< 1.25	ppb			WG732839	07/21/14 12:13
2-Chlorotoluene	< .2	ppb			WG732839	07/21/14 12:13
2-Propanol	< 1.25	ppb			WG732839	07/21/14 12:13
4-Ethyltoluene	< .2	ppb			WG732839	07/21/14 12:13
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG732839	07/21/14 12:13
Acetone	< 1.25	ppb			WG732839	07/21/14 12:13
Allyl chloride	< .2	ppb			WG732839	07/21/14 12:13
Benzene	< .2	ppb			WG732839	07/21/14 12:13
Benzyl Chloride	< .2	ppb			WG732839	07/21/14 12:13
Bromodichloromethane	< .2	ppb			WG732839	07/21/14 12:13
Bromoform	< .6	ppb			WG732839	07/21/14 12:13
Bromomethane	< .2	ppb			WG732839	07/21/14 12:13
Carbon disulfide	< .2	ppb			WG732839	07/21/14 12:13
Carbon tetrachloride	< .2	ppb			WG732839	07/21/14 12:13
Chlorobenzene	< .2	ppb			WG732839	07/21/14 12:13
Dibromochloromethane	< .2	ppb			WG732839	07/21/14 12:13
Chloroethane	< .2	ppb			WG732839	07/21/14 12:13
Chloroform	< .2	ppb			WG732839	07/21/14 12:13
Chloromethane	< .2	ppb			WG732839	07/21/14 12:13
cis-1,2-Dichloroethene	< .2	ppb			WG732839	07/21/14 12:13
cis-1,3-Dichloropropene	< .2	ppb			WG732839	07/21/14 12:13
Cyclohexane	< .2	ppb			WG732839	07/21/14 12:13
Dichlorodifluoromethane	< .2	ppb			WG732839	07/21/14 12:13
Ethanol	< .63	ppb			WG732839	07/21/14 12:13
Ethylbenzene	< .2	ppb			WG732839	07/21/14 12:13
Heptane	< .2	ppb			WG732839	07/21/14 12:13
Hexachloro-1,3-butadiene	< .63	ppb			WG732839	07/21/14 12:13
Isopropylbenzene	< .2	ppb			WG732839	07/21/14 12:13
m&p-Xylene	< .4	ppb			WG732839	07/21/14 12:13
Methyl Butyl Ketone	< 1.25	ppb			WG732839	07/21/14 12:13
Methyl methacrylate	< .2	ppb			WG732839	07/21/14 12:13
MTBE	< .2	ppb			WG732839	07/21/14 12:13
Methylene Chloride	< .2	ppb			WG732839	07/21/14 12:13
n-Hexane	< .2	ppb			WG732839	07/21/14 12:13
Naphthalene	< .63	ppb			WG732839	07/21/14 12:13
o-Xylene	< .2	ppb			WG732839	07/21/14 12:13
Propene	< .4	ppb			WG732839	07/21/14 12:13
Styrene	< .2	ppb			WG732839	07/21/14 12:13
Tetrachloroethylene	< .2	ppb			WG732839	07/21/14 12:13
Tetrahydrofuran	< .2	ppb			WG732839	07/21/14 12:13

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 Level II
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Tax I.D. 62-0814289

Est. 1970

July 24, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .2	ppb			WG732839	07/21/14 12:13
trans-1,2-Dichloroethene	< .2	ppb			WG732839	07/21/14 12:13
trans-1,3-Dichloropropene	< .2	ppb			WG732839	07/21/14 12:13
Trichlorofluoromethane	< .2	ppb			WG732839	07/21/14 12:13
Vinyl acetate	< .2	ppb			WG732839	07/21/14 12:13
Vinyl Bromide	< .2	ppb			WG732839	07/21/14 12:13
Vinyl chloride	< .2	ppb			WG732839	07/21/14 12:13
1,4-Bromofluorobenzene		% Rec.	97.90	60-140	WG732839	07/21/14 12:13
1,1,1-Trichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1,2,2-Tetrachloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1,2-Trichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1-Dichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,1-Dichloroethene	< .2	ppb			WG732841	07/21/14 09:44
1,2,4-Trichlorobenzene	< .63	ppb			WG732841	07/21/14 09:44
1,2,4-Trimethylbenzene	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dibromoethane	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichloroethane	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichloropropane	< .2	ppb			WG732841	07/21/14 09:44
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG732841	07/21/14 09:44
1,3,5-Trimethylbenzene	< .2	ppb			WG732841	07/21/14 09:44
1,3-Butadiene	< 2	ppb			WG732841	07/21/14 09:44
1,3-Dichlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
1,4-Dichlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
1,4-Dioxane	< .2	ppb			WG732841	07/21/14 09:44
2,2,4-Trimethylpentane	< .2	ppb			WG732841	07/21/14 09:44
2-Butanone (MEK)	< 1.25	ppb			WG732841	07/21/14 09:44
2-Chlorotoluene	< .2	ppb			WG732841	07/21/14 09:44
2-Propanol	< 1.25	ppb			WG732841	07/21/14 09:44
4-Ethyltoluene	< .2	ppb			WG732841	07/21/14 09:44
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG732841	07/21/14 09:44
Acetone	< 1.25	ppb			WG732841	07/21/14 09:44
Allyl chloride	< .2	ppb			WG732841	07/21/14 09:44
Benzene	< .2	ppb			WG732841	07/21/14 09:44
Benzyl Chloride	< .2	ppb			WG732841	07/21/14 09:44
Bromodichloromethane	< .2	ppb			WG732841	07/21/14 09:44
Bromoform	< .6	ppb			WG732841	07/21/14 09:44
Bromomethane	< .2	ppb			WG732841	07/21/14 09:44
Carbon disulfide	< .2	ppb			WG732841	07/21/14 09:44
Carbon tetrachloride	< .2	ppb			WG732841	07/21/14 09:44
Chlorobenzene	< .2	ppb			WG732841	07/21/14 09:44
Dibromochloromethane	< .2	ppb			WG732841	07/21/14 09:44
Chloroethane	< .2	ppb			WG732841	07/21/14 09:44
Chloroform	< .2	ppb			WG732841	07/21/14 09:44
Chloromethane	< .2	ppb			WG732841	07/21/14 09:44
cis-1,2-Dichloroethene	< .2	ppb			WG732841	07/21/14 09:44
cis-1,3-Dichloropropene	< .2	ppb			WG732841	07/21/14 09:44
Cyclohexane	< .2	ppb			WG732841	07/21/14 09:44
Dichlorodifluoromethane	< .2	ppb			WG732841	07/21/14 09:44
Ethanol	< .63	ppb			WG732841	07/21/14 09:44
Ethylbenzene	< .2	ppb			WG732841	07/21/14 09:44
Heptane	< .2	ppb			WG732841	07/21/14 09:44
Hexachloro-1,3-butadiene	< .63	ppb			WG732841	07/21/14 09:44
Isopropylbenzene	< .2	ppb			WG732841	07/21/14 09:44
m&p-Xylene	< .4	ppb			WG732841	07/21/14 09:44
Methyl Butyl Ketone	< 1.25	ppb			WG732841	07/21/14 09:44

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Est. 1970

July 24, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Methyl methacrylate	< .2	ppb			WG732841	07/21/14 09:44
MTBE	< .2	ppb			WG732841	07/21/14 09:44
Methylene Chloride	< .2	ppb			WG732841	07/21/14 09:44
n-Hexane	< .2	ppb			WG732841	07/21/14 09:44
Naphthalene	< .63	ppb			WG732841	07/21/14 09:44
o-Xylene	< .2	ppb			WG732841	07/21/14 09:44
Propene	< .4	ppb			WG732841	07/21/14 09:44
Styrene	< .2	ppb			WG732841	07/21/14 09:44
Tetrahydrofuran	< .2	ppb			WG732841	07/21/14 09:44
Toluene	< .2	ppb			WG732841	07/21/14 09:44
trans-1,2-Dichloroethene	< .2	ppb			WG732841	07/21/14 09:44
trans-1,3-Dichloropropene	< .2	ppb			WG732841	07/21/14 09:44
Trichlorofluoromethane	< .2	ppb			WG732841	07/21/14 09:44
Vinyl acetate	< .2	ppb			WG732841	07/21/14 09:44
Vinyl Bromide	< .2	ppb			WG732841	07/21/14 09:44
Vinyl chloride	< .2	ppb			WG732841	07/21/14 09:44
1,4-Bromofluorobenzene		% Rec.	95.00	60-140	WG732841	07/21/14 09:44
1,1,1-Trichloroethane	< .2	ppb			WG733105	07/22/14 13:08
1,1,2,2-Tetrachloroethane	< .2	ppb			WG733105	07/22/14 13:08
1,1,2-Trichloroethane	< .2	ppb			WG733105	07/22/14 13:08
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG733105	07/22/14 13:08
1,1-Dichloroethane	< .2	ppb			WG733105	07/22/14 13:08
1,1-Dichloroethene	< .2	ppb			WG733105	07/22/14 13:08
1,2,4-Trichlorobenzene	< .63	ppb			WG733105	07/22/14 13:08
1,2,4-Trimethylbenzene	< .2	ppb			WG733105	07/22/14 13:08
1,2-Dibromoethane	< .2	ppb			WG733105	07/22/14 13:08
1,2-Dichlorobenzene	< .2	ppb			WG733105	07/22/14 13:08
1,2-Dichloroethane	< .2	ppb			WG733105	07/22/14 13:08
1,2-Dichloropropane	< .2	ppb			WG733105	07/22/14 13:08
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG733105	07/22/14 13:08
1,3,5-Trimethylbenzene	< .2	ppb			WG733105	07/22/14 13:08
1,3-Butadiene	< .2	ppb			WG733105	07/22/14 13:08
1,3-Dichlorobenzene	< .2	ppb			WG733105	07/22/14 13:08
1,4-Dichlorobenzene	< .2	ppb			WG733105	07/22/14 13:08
1,4-Dioxane	< .2	ppb			WG733105	07/22/14 13:08
2,2,4-Trimethylpentane	< .2	ppb			WG733105	07/22/14 13:08
2-Butanone (MEK)	< 1.25	ppb			WG733105	07/22/14 13:08
2-Chlorotoluene	< .2	ppb			WG733105	07/22/14 13:08
2-Propanol	< 1.25	ppb			WG733105	07/22/14 13:08
4-Ethyltoluene	< .2	ppb			WG733105	07/22/14 13:08
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG733105	07/22/14 13:08
Acetone	< 1.25	ppb			WG733105	07/22/14 13:08
Allyl chloride	< .2	ppb			WG733105	07/22/14 13:08
Benzene	< .2	ppb			WG733105	07/22/14 13:08
Benzyl Chloride	< .2	ppb			WG733105	07/22/14 13:08
Bromodichloromethane	< .2	ppb			WG733105	07/22/14 13:08
Bromoform	< .6	ppb			WG733105	07/22/14 13:08
Bromomethane	< .2	ppb			WG733105	07/22/14 13:08
Carbon disulfide	< .2	ppb			WG733105	07/22/14 13:08
Carbon tetrachloride	< .2	ppb			WG733105	07/22/14 13:08
Chlorobenzene	< .2	ppb			WG733105	07/22/14 13:08
Dibromochloromethane	< .2	ppb			WG733105	07/22/14 13:08
Chloroethane	< .2	ppb			WG733105	07/22/14 13:08
Chloroform	< .2	ppb			WG733105	07/22/14 13:08
Chloromethane	< .2	ppb			WG733105	07/22/14 13:08
cis-1,2-Dichloroethene	< .2	ppb			WG733105	07/22/14 13:08
cis-1,3-Dichloropropene	< .2	ppb			WG733105	07/22/14 13:08

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July 24, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cyclohexane	< .2	ppb			WG733105	07/22/14 13:08
Dichlorodifluoromethane	< .2	ppb			WG733105	07/22/14 13:08
Ethanol	< .63	ppb			WG733105	07/22/14 13:08
Ethylbenzene	< .2	ppb			WG733105	07/22/14 13:08
Heptane	< .2	ppb			WG733105	07/22/14 13:08
Hexachloro-1,3-butadiene	< .63	ppb			WG733105	07/22/14 13:08
Isopropylbenzene	< .2	ppb			WG733105	07/22/14 13:08
m&p-Xylene	< .4	ppb			WG733105	07/22/14 13:08
Methyl Butyl Ketone	< 1.25	ppb			WG733105	07/22/14 13:08
Methyl methacrylate	< .2	ppb			WG733105	07/22/14 13:08
MTBE	< .2	ppb			WG733105	07/22/14 13:08
Methylene Chloride	< .2	ppb			WG733105	07/22/14 13:08
n-Hexane	< .2	ppb			WG733105	07/22/14 13:08
Naphthalene	< .63	ppb			WG733105	07/22/14 13:08
o-Xylene	< .2	ppb			WG733105	07/22/14 13:08
Propene	< .4	ppb			WG733105	07/22/14 13:08
Styrene	< .2	ppb			WG733105	07/22/14 13:08
Tetrachloroethylene	< .2	ppb			WG733105	07/22/14 13:08
Tetrahydrofuran	< .2	ppb			WG733105	07/22/14 13:08
Toluene	< .2	ppb			WG733105	07/22/14 13:08
trans-1,2-Dichloroethene	< .2	ppb			WG733105	07/22/14 13:08
trans-1,3-Dichloropropene	< .2	ppb			WG733105	07/22/14 13:08
Trichlorofluoromethane	< .2	ppb			WG733105	07/22/14 13:08
Vinyl acetate	< .2	ppb			WG733105	07/22/14 13:08
Vinyl Bromide	< .2	ppb			WG733105	07/22/14 13:08
Vinyl chloride	< .2	ppb			WG733105	07/22/14 13:08
1,4-Bromofluorobenzene		% Rec.	102.0	60-140	WG733105	07/22/14 13:08
Tetrachloroethylene	< .2	ppb			WG733187	07/22/14 09:51
Trichloroethylene	< .2	ppb			WG733187	07/22/14 09:51
1,4-Bromofluorobenzene		% Rec.	96.20	60-140	WG733187	07/22/14 09:51
Trichloroethylene	< .2	ppb			WG733120	07/22/14 21:59
1,4-Bromofluorobenzene		% Rec.	98.20	60-140	WG733120	07/22/14 21:59
cis-1,2-Dichloroethene	< .2	ppb			WG733360	07/23/14 18:06
Trichloroethylene	< .2	ppb			WG733360	07/23/14 18:06
1,4-Bromofluorobenzene		% Rec.	96.60	60-140	WG733360	07/23/14 18:06

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	ppb	3.75	3.92	105.	70-130	WG732839
1,1,2,2-Tetrachloroethane	ppb	3.75	3.91	104.	70-130	WG732839
1,1,2-Trichloroethane	ppb	3.75	3.77	101.	70-130	WG732839
1,1,2-Trichlorotrifluoroethane	ppb	3.75	3.84	103.	70-130	WG732839
1,1-Dichloroethane	ppb	3.75	3.83	102.	70-130	WG732839
1,1-Dichloroethene	ppb	3.75	3.61	96.2	70-130	WG732839
1,2,4-Trichlorobenzene	ppb	3.75	4.57	122.	59.7-155	WG732839
1,2,4-Trimethylbenzene	ppb	3.75	3.90	104.	70-130	WG732839
1,2-Dibromoethane	ppb	3.75	3.92	105.	70-130	WG732839
1,2-Dichlorobenzene	ppb	3.75	3.92	105.	70-130	WG732839
1,2-Dichloroethane	ppb	3.75	3.50	93.3	70-130	WG732839
1,2-Dichloropropane	ppb	3.75	3.63	96.8	70-130	WG732839
1,2-Dichlorotetrafluoroethane	ppb	3.75	4.11	110.	70-130	WG732839
1,3,5-Trimethylbenzene	ppb	3.75	3.96	106.	70-130	WG732839

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,3-Butadiene	ppb	3.75	3.80	101.	70-130	WG732839
1,3-Dichlorobenzene	ppb	3.75	3.94	105.	70-130	WG732839
1,4-Dichlorobenzene	ppb	3.75	3.98	106.	70-130	WG732839
1,4-Dioxane	ppb	3.75	4.42	118.	70-130	WG732839
2,2,4-Trimethylpentane	ppb	3.75	3.83	102.	70-130	WG732839
2-Butanone (MEK)	ppb	3.75	3.98	106.	70-130	WG732839
2-Chlorotoluene	ppb	3.75	3.75	100.	70-130	WG732839
2-Propanol	ppb	3.75	4.10	109.	62.2-137	WG732839
4-Ethyltoluene	ppb	3.75	3.87	103.	70-130	WG732839
4-Methyl-2-pentanone (MIBK)	ppb	3.75	3.93	105.	51.3-144	WG732839
Acetone	ppb	3.75	3.59	95.8	70-130	WG732839
Allyl chloride	ppb	3.75	3.79	101.	70-130	WG732839
Benzene	ppb	3.75	3.68	98.2	70-130	WG732839
Benzyl Chloride	ppb	3.75	5.61	150.*	70-130	WG732839
Bromodichloromethane	ppb	3.75	3.77	101.	70-130	WG732839
Bromoform	ppb	3.75	4.03	107.	70-130	WG732839
Bromomethane	ppb	3.75	4.23	113.	70-130	WG732839
Carbon disulfide	ppb	3.75	4.10	109.	70-130	WG732839
Carbon tetrachloride	ppb	3.75	4.05	108.	70-130	WG732839
Chlorobenzene	ppb	3.75	3.79	101.	70-130	WG732839
Dibromochloromethane	ppb	3.75	4.03	108.	70-130	WG732839
Chloroethane	ppb	3.75	3.98	106.	70-130	WG732839
Chloroform	ppb	3.75	3.93	105.	70-130	WG732839
Chloromethane	ppb	3.75	4.08	109.	70-130	WG732839
cis-1,2-Dichloroethene	ppb	3.75	3.83	102.	70-130	WG732839
cis-1,3-Dichloropropene	ppb	3.75	3.95	105.	70-130	WG732839
Cyclohexane	ppb	3.75	4.00	107.	70-130	WG732839
Dichlorodifluoromethane	ppb	3.75	2.86	76.2	70-130	WG732839
Ethanol	ppb	3.75	4.74	127.	52.6-145	WG732839
Ethylbenzene	ppb	3.75	3.70	98.6	70-130	WG732839
Heptane	ppb	3.75	3.48	92.9	70-130	WG732839
Hexachloro-1,3-butadiene	ppb	3.75	4.04	108.	55.7-144	WG732839
Isopropylbenzene	ppb	3.75	3.79	101.	70-130	WG732839
m&p-Xylene	ppb	7.5	7.21	96.1	70-130	WG732839
Methyl Butyl Ketone	ppb	3.75	4.35	116.	36.5-155	WG732839
Methyl methacrylate	ppb	3.75	3.30	87.9	70-130	WG732839
MTBE	ppb	3.75	3.77	100.	70-130	WG732839
Methylene Chloride	ppb	3.75	3.54	94.4	70-130	WG732839
n-Hexane	ppb	3.75	3.82	102.	70-130	WG732839
Naphthalene	ppb	3.75	4.88	130.	53.4-158	WG732839
o-Xylene	ppb	3.75	3.71	99.0	70-130	WG732839
Propene	ppb	3.75	3.98	106.	70-130	WG732839
Styrene	ppb	3.75	3.96	106.	70-130	WG732839
Tetrachloroethylene	ppb	3.75	3.60	96.0	70-130	WG732839
Tetrahydrofuran	ppb	3.75	3.92	105.	70-130	WG732839
Toluene	ppb	3.75	3.69	98.4	70-130	WG732839
trans-1,2-Dichloroethene	ppb	3.75	3.85	103.	70-130	WG732839
trans-1,3-Dichloropropene	ppb	3.75	3.98	106.	70-130	WG732839
Trichlorofluoromethane	ppb	3.75	3.82	102.	70-130	WG732839
Vinyl acetate	ppb	3.75	3.82	102.	70-130	WG732839
Vinyl Bromide	ppb	3.75	4.12	110.	70-130	WG732839
Vinyl chloride	ppb	3.75	4.13	110.	70-130	WG732839
1,4-Bromofluorobenzene				101.0	60-140	WG732839
1,1,1-Trichloroethane	ppb	3.75	3.70	98.6	70-130	WG732841
1,1,2,2-Tetrachloroethane	ppb	3.75	3.36	89.7	70-130	WG732841
1,1,2-Trichloroethane	ppb	3.75	3.48	92.8	70-130	WG732841
1,1,2-Trichlorotrifluoroethane	ppb	3.75	3.59	95.8	70-130	WG732841

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Quality Assurance Report
 Level II

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Est. 1970

July 24, 2014

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1-Dichloroethane	ppb	3.75	3.39	90.4	70-130	WG732841
1,1-Dichloroethene	ppb	3.75	3.43	91.5	70-130	WG732841
1,2,4-Trichlorobenzene	ppb	3.75	4.36	116.	59.7-155	WG732841
1,2,4-Trimethylbenzene	ppb	3.75	3.69	98.4	70-130	WG732841
1,2-Dibromoethane	ppb	3.75	3.58	95.5	70-130	WG732841
1,2-Dichlorobenzene	ppb	3.75	3.81	102.	70-130	WG732841
1,2-Dichloroethane	ppb	3.75	3.64	97.1	70-130	WG732841
1,2-Dichloropropane	ppb	3.75	3.11	82.9	70-130	WG732841
1,2-Dichlorotetrafluoroethane	ppb	3.75	3.45	92.1	70-130	WG732841
1,3,5-Trimethylbenzene	ppb	3.75	3.60	96.1	70-130	WG732841
1,3-Butadiene	ppb	3.75	4.17	111.	70-130	WG732841
1,3-Dichlorobenzene	ppb	3.75	3.78	101.	70-130	WG732841
1,4-Dichlorobenzene	ppb	3.75	3.85	103.	70-130	WG732841
1,4-Dioxane	ppb	3.75	4.03	108.	70-130	WG732841
2,2,4-Trimethylpentane	ppb	3.75	3.21	85.6	70-130	WG732841
2-Butanone (MEK)	ppb	3.75	3.46	92.2	70-130	WG732841
2-Chlorotoluene	ppb	3.75	3.70	98.5	70-130	WG732841
2-Propanol	ppb	3.75	3.80	101.	62.2-137	WG732841
4-Ethyltoluene	ppb	3.75	3.59	95.8	70-130	WG732841
4-Methyl-2-pentanone (MIBK)	ppb	3.75	3.49	93.0	51.3-144	WG732841
Acetone	ppb	3.75	3.36	89.7	70-130	WG732841
Allyl chloride	ppb	3.75	3.16	84.2	70-130	WG732841
Benzene	ppb	3.75	3.28	87.4	70-130	WG732841
Benzyl Chloride	ppb	3.75	3.87	103.	70-130	WG732841
Bromodichloromethane	ppb	3.75	3.51	93.5	70-130	WG732841
Bromoform	ppb	3.75	3.88	104.	70-130	WG732841
Bromomethane	ppb	3.75	3.86	103.	70-130	WG732841
Carbon disulfide	ppb	3.75	3.36	89.7	70-130	WG732841
Carbon tetrachloride	ppb	3.75	3.76	100.	70-130	WG732841
Chlorobenzene	ppb	3.75	3.61	96.2	70-130	WG732841
Dibromochloromethane	ppb	3.75	3.70	98.6	70-130	WG732841
Chloroethane	ppb	3.75	3.46	92.2	70-130	WG732841
Chloroform	ppb	3.75	3.54	94.4	70-130	WG732841
Chloromethane	ppb	3.75	3.07	81.8	70-130	WG732841
cis-1,2-Dichloroethene	ppb	3.75	3.36	89.6	70-130	WG732841
cis-1,3-Dichloropropene	ppb	3.75	3.44	91.8	70-130	WG732841
Cyclohexane	ppb	3.75	3.51	93.6	70-130	WG732841
Dichlorodifluoromethane	ppb	3.75	3.22	85.8	70-130	WG732841
Ethanol	ppb	3.75	3.64	97.0	52.6-145	WG732841
Ethylbenzene	ppb	3.75	3.51	93.5	70-130	WG732841
Heptane	ppb	3.75	3.02	80.5	70-130	WG732841
Hexachloro-1,3-butadiene	ppb	3.75	4.47	119.	55.7-144	WG732841
Isopropylbenzene	ppb	3.75	3.53	94.1	70-130	WG732841
m&p-Xylene	ppb	7.5	6.85	91.3	70-130	WG732841
Methyl Butyl Ketone	ppb	3.75	3.59	95.7	36.5-155	WG732841
Methyl methacrylate	ppb	3.75	3.19	85.2	70-130	WG732841
MTBE	ppb	3.75	3.49	93.0	70-130	WG732841
Methylene Chloride	ppb	3.75	3.08	82.1	70-130	WG732841
n-Hexane	ppb	3.75	3.20	85.2	70-130	WG732841
Naphthalene	ppb	3.75	4.31	115.	53.4-158	WG732841
o-Xylene	ppb	3.75	3.44	91.7	70-130	WG732841
Propene	ppb	3.75	2.94	78.3	70-130	WG732841
Styrene	ppb	3.75	3.55	94.7	70-130	WG732841
Tetrahydrofuran	ppb	3.75	3.32	88.6	70-130	WG732841
Toluene	ppb	3.75	3.50	93.4	70-130	WG732841
trans-1,2-Dichloroethene	ppb	3.75	3.33	88.8	70-130	WG732841
trans-1,3-Dichloropropene	ppb	3.75	3.55	94.8	70-130	WG732841
Trichlorofluoromethane	ppb	3.75	3.77	100.	70-130	WG732841
Vinyl acetate	ppb	3.75	3.21	85.6	70-130	WG732841

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Vinyl Bromide	ppb	3.75	3.61	96.1	70-130	WG732841
Vinyl chloride	ppb	3.75	4.16	111.	70-130	WG732841
1,4-Bromofluorobenzene				95.10	60-140	WG732841
1,1,1-Trichloroethane	ppb	3.75	3.49	93.1	70-130	WG733105
1,1,2,2-Tetrachloroethane	ppb	3.75	3.55	94.6	70-130	WG733105
1,1,2-Trichloroethane	ppb	3.75	3.56	95.0	70-130	WG733105
1,1,2-Trichlorotrifluoroethane	ppb	3.75	3.62	96.5	70-130	WG733105
1,1-Dichloroethane	ppb	3.75	3.49	93.1	70-130	WG733105
1,1-Dichloroethene	ppb	3.75	3.30	88.0	70-130	WG733105
1,2,4-Trichlorobenzene	ppb	3.75	4.01	107.	59.7-155	WG733105
1,2,4-Trimethylbenzene	ppb	3.75	3.50	93.3	70-130	WG733105
1,2-Dibromoethane	ppb	3.75	3.65	97.3	70-130	WG733105
1,2-Dichlorobenzene	ppb	3.75	3.52	93.8	70-130	WG733105
1,2-Dichloroethane	ppb	3.75	3.10	82.6	70-130	WG733105
1,2-Dichloropropane	ppb	3.75	3.37	89.9	70-130	WG733105
1,2-Dichlorotetrafluoroethane	ppb	3.75	3.72	99.1	70-130	WG733105
1,3,5-Trimethylbenzene	ppb	3.75	3.55	94.7	70-130	WG733105
1,3-Butadiene	ppb	3.75	3.25	86.7	70-130	WG733105
1,3-Dichlorobenzene	ppb	3.75	3.54	94.4	70-130	WG733105
1,4-Dichlorobenzene	ppb	3.75	3.58	95.5	70-130	WG733105
1,4-Dioxane	ppb	3.75	3.98	106.	70-130	WG733105
2,2,4-Trimethylpentane	ppb	3.75	3.47	92.4	70-130	WG733105
2-Butanone (MEK)	ppb	3.75	3.65	97.3	70-130	WG733105
2-Chlorotoluene	ppb	3.75	3.38	90.1	70-130	WG733105
2-Propanol	ppb	3.75	3.82	102.	62.2-137	WG733105
4-Ethyltoluene	ppb	3.75	3.49	93.1	70-130	WG733105
4-Methyl-2-pentanone (MIBK)	ppb	3.75	3.45	92.0	51.3-144	WG733105
Acetone	ppb	3.75	3.25	86.6	70-130	WG733105
Allyl chloride	ppb	3.75	3.32	88.6	70-130	WG733105
Benzene	ppb	3.75	3.35	89.4	70-130	WG733105
Benzyl Chloride	ppb	3.75	4.97	133.*	70-130	WG733105
Bromodichloromethane	ppb	3.75	3.44	91.7	70-130	WG733105
Bromoform	ppb	3.75	3.64	97.1	70-130	WG733105
Bromomethane	ppb	3.75	3.90	104.	70-130	WG733105
Carbon disulfide	ppb	3.75	3.83	102.	70-130	WG733105
Carbon tetrachloride	ppb	3.75	3.60	96.0	70-130	WG733105
Chlorobenzene	ppb	3.75	3.56	95.0	70-130	WG733105
Dibromochloromethane	ppb	3.75	3.72	99.3	70-130	WG733105
Chloroethane	ppb	3.75	3.62	96.5	70-130	WG733105
Chloroform	ppb	3.75	3.51	93.5	70-130	WG733105
Chloromethane	ppb	3.75	3.59	95.8	70-130	WG733105
cis-1,2-Dichloroethene	ppb	3.75	3.42	91.1	70-130	WG733105
cis-1,3-Dichloropropene	ppb	3.75	3.61	96.1	70-130	WG733105
Cyclohexane	ppb	3.75	3.60	96.0	70-130	WG733105
Dichlorodifluoromethane	ppb	3.75	2.72	72.6	70-130	WG733105
Ethanol	ppb	3.75	4.37	117.	52.6-145	WG733105
Ethylbenzene	ppb	3.75	3.40	90.7	70-130	WG733105
Heptane	ppb	3.75	3.06	81.5	70-130	WG733105
Hexachloro-1,3-butadiene	ppb	3.75	3.39	90.4	55.7-144	WG733105
Isopropylbenzene	ppb	3.75	3.48	92.8	70-130	WG733105
m&p-Xylene	ppb	7.5	6.60	88.0	70-130	WG733105
Methyl Butyl Ketone	ppb	3.75	3.81	102.	36.5-155	WG733105
Methyl methacrylate	ppb	3.75	2.99	79.8	70-130	WG733105
MTBE	ppb	3.75	3.60	96.0	70-130	WG733105
Methylene Chloride	ppb	3.75	3.13	83.5	70-130	WG733105
n-Hexane	ppb	3.75	3.39	90.3	70-130	WG733105
Naphthalene	ppb	3.75	4.30	115.	53.4-158	WG733105

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
o-Xylene	ppb	3.75	3.41	91.0	70-130	WG733105
Propene	ppb	3.75	3.50	93.3	70-130	WG733105
Styrene	ppb	3.75	3.59	95.8	70-130	WG733105
Tetrachloroethylene	ppb	3.75	3.39	90.4	70-130	WG733105
Tetrahydrofuran	ppb	3.75	3.54	94.3	70-130	WG733105
Toluene	ppb	3.75	3.48	92.8	70-130	WG733105
trans-1,2-Dichloroethene	ppb	3.75	3.44	91.8	70-130	WG733105
trans-1,3-Dichloropropene	ppb	3.75	3.75	100.	70-130	WG733105
Trichlorofluoromethane	ppb	3.75	3.42	91.1	70-130	WG733105
Vinyl acetate	ppb	3.75	3.45	92.0	70-130	WG733105
Vinyl Bromide	ppb	3.75	3.82	102.	70-130	WG733105
Vinyl chloride	ppb	3.75	3.74	99.6	70-130	WG733105
1,4-Bromofluorobenzene				104.0	60-140	WG733105
Tetrachloroethylene	ppb	3.75	3.81	102.	70-130	WG733187
Trichloroethylene	ppb	3.75	3.44	91.8	70-130	WG733187
1,4-Bromofluorobenzene				97.40	60-140	WG733187
Trichloroethylene	ppb	3.75	3.10	82.7	70-130	WG733120
1,4-Bromofluorobenzene				103.0	60-140	WG733120
cis-1,2-Dichloroethene	ppb	3.75	3.40	90.7	70-130	WG733360
Trichloroethylene	ppb	3.75	3.34	89.1	70-130	WG733360
1,4-Bromofluorobenzene				113.0	60-140	WG733360

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1-Trichloroethane	ppb	3.76	3.92	100.	70-130	4.18	25	WG732839
1,1,2,2-Tetrachloroethane	ppb	3.77	3.91	101.	70-130	3.58	25	WG732839
1,1,2-Trichloroethane	ppb	3.77	3.77	100.	70-130	0.120	25	WG732839
1,1,2-Trichlorotrifluoroethane	ppb	3.64	3.84	97.0	70-130	5.44	25	WG732839
1,1-Dichloroethane	ppb	3.69	3.83	98.0	70-130	3.95	25	WG732839
1,1-Dichloroethene	ppb	3.46	3.61	92.0	70-130	4.06	25	WG732839
1,2,4-Trichlorobenzene	ppb	4.09	4.57	109.	59.7-155	11.1	25	WG732839
1,2,4-Trimethylbenzene	ppb	3.75	3.90	100.	70-130	3.87	25	WG732839
1,2-Dibromoethane	ppb	3.84	3.92	102.	70-130	2.19	25	WG732839
1,2-Dichlorobenzene	ppb	3.74	3.92	100.	70-130	4.63	25	WG732839
1,2-Dichloroethane	ppb	3.36	3.50	90.0	70-130	4.09	25	WG732839
1,2-Dichloropropane	ppb	3.54	3.63	94.0	70-130	2.55	25	WG732839
1,2-Dichlorotetrafluoroethane	ppb	3.91	4.11	104.	70-130	5.05	25	WG732839
1,3,5-Trimethylbenzene	ppb	3.79	3.96	101.	70-130	4.62	25	WG732839
1,3-Butadiene	ppb	3.56	3.80	95.0	70-130	6.36	25	WG732839
1,3-Dichlorobenzene	ppb	3.82	3.94	102.	70-130	3.09	25	WG732839
1,4-Dichlorobenzene	ppb	3.84	3.98	102.	70-130	3.72	25	WG732839
1,4-Dioxane	ppb	4.24	4.42	113.	70-130	4.24	25	WG732839
2,2,4-Trimethylpentane	ppb	3.69	3.83	98.0	70-130	3.62	25	WG732839
2-Butanone (MEK)	ppb	4.02	3.98	107.	70-130	1.06	25	WG732839
2-Chlorotoluene	ppb	3.64	3.75	97.0	70-130	2.97	25	WG732839
2-Propanol	ppb	3.98	4.10	106.	62.2-137	2.92	25	WG732839
4-Ethyltoluene	ppb	3.77	3.87	100.	70-130	2.69	25	WG732839
4-Methyl-2-pentanone (MIBK)	ppb	3.85	3.93	103.	51.3-144	2.05	25	WG732839
Acetone	ppb	3.58	3.59	96.0	70-130	0.310	25	WG732839
Allyl chloride	ppb	3.61	3.79	96.0	70-130	4.80	25	WG732839
Benzene	ppb	3.56	3.68	95.0	70-130	3.41	25	WG732839
Benzyl Chloride	ppb	5.30	5.61	141*	70-130	5.68	25	WG732839

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Bromodichloromethane	ppb	3.74	3.77	100.	70-130	0.850	25	WG732839
Bromoform	ppb	3.96	4.03	106.	70-130	1.83	25	WG732839
Bromomethane	ppb	3.99	4.23	106.	70-130	5.81	25	WG732839
Carbon disulfide	ppb	3.88	4.10	104.	70-130	5.35	25	WG732839
Carbon tetrachloride	ppb	3.88	4.05	104.	70-130	4.26	25	WG732839
Chlorobenzene	ppb	3.80	3.79	101.	70-130	0.300	25	WG732839
Dibromochloromethane	ppb	3.97	4.03	106.	70-130	1.52	25	WG732839
Chloroethane	ppb	3.76	3.98	100.	70-130	5.61	25	WG732839
Chloroform	ppb	3.72	3.93	99.0	70-130	5.55	25	WG732839
Chloromethane	ppb	3.74	4.08	100.	70-130	8.65	25	WG732839
cis-1,2-Dichloroethene	ppb	3.69	3.83	98.0	70-130	3.74	25	WG732839
cis-1,3-Dichloropropene	ppb	3.90	3.95	104.	70-130	1.39	25	WG732839
Cyclohexane	ppb	3.84	4.00	102.	70-130	4.21	25	WG732839
Dichlorodifluoromethane	ppb	3.78	2.86	101.	70-130	27.7*	25	WG732839
Ethanol	ppb	4.72	4.74	126.	52.6-145	0.490	25	WG732839
Ethylbenzene	ppb	3.60	3.70	96.0	70-130	2.50	25	WG732839
Heptane	ppb	3.35	3.48	89.0	70-130	3.92	25	WG732839
Hexachloro-1,3-butadiene	ppb	3.68	4.04	98.0	55.7-144	9.46	25	WG732839
Isopropylbenzene	ppb	3.74	3.79	100.	70-130	1.48	25	WG732839
m&p-Xylene	ppb	7.01	7.21	93.0	70-130	2.73	25	WG732839
Methyl Butyl Ketone	ppb	4.15	4.35	110.	36.5-155	4.88	25	WG732839
Methyl methacrylate	ppb	3.32	3.30	88.0	70-130	0.540	25	WG732839
MTBE	ppb	3.75	3.77	100.	70-130	0.400	25	WG732839
Methylene Chloride	ppb	3.37	3.54	90.0	70-130	4.84	25	WG732839
n-Hexane	ppb	3.58	3.82	95.0	70-130	6.57	25	WG732839
Naphthalene	ppb	4.47	4.88	119.	53.4-158	8.82	25	WG732839
o-Xylene	ppb	3.61	3.71	96.0	70-130	2.72	25	WG732839
Propene	ppb	3.68	3.98	98.0	70-130	7.87	25	WG732839
Styrene	ppb	3.80	3.96	101.	70-130	4.12	25	WG732839
Tetrachloroethylene	ppb	3.60	3.60	96.0	70-130	0.0700	25	WG732839
Tetrahydrofuran	ppb	3.82	3.92	102.	70-130	2.56	25	WG732839
Toluene	ppb	3.68	3.69	98.0	70-130	0.410	25	WG732839
trans-1,2-Dichloroethene	ppb	3.67	3.85	98.0	70-130	4.93	25	WG732839
trans-1,3-Dichloropropene	ppb	3.98	3.98	106.	70-130	0.0500	25	WG732839
Trichlorofluoromethane	ppb	3.66	3.82	98.0	70-130	4.31	25	WG732839
Vinyl acetate	ppb	3.72	3.82	99.0	70-130	2.69	25	WG732839
Vinyl Bromide	ppb	3.92	4.12	104.	70-130	5.01	25	WG732839
Vinyl chloride	ppb	3.93	4.13	105.	70-130	4.92	25	WG732839
1,4-Bromofluorobenzene				102.0	60-140			WG732839
1,1,1-Trichloroethane	ppb	3.61	3.70	96.0	70-130	2.36	25	WG732841
1,1,2,2-Tetrachloroethane	ppb	3.38	3.36	90.0	70-130	0.520	25	WG732841
1,1,2-Trichloroethane	ppb	3.42	3.48	91.0	70-130	1.80	25	WG732841
1,1,2-Trichlorotrifluoroethane	ppb	3.51	3.59	93.0	70-130	2.48	25	WG732841
1,1-Dichloroethane	ppb	3.23	3.39	86.0	70-130	4.68	25	WG732841
1,1-Dichloroethene	ppb	3.29	3.43	88.0	70-130	4.15	25	WG732841
1,2,4-Trichlorobenzene	ppb	4.55	4.36	121.	59.7-155	4.27	25	WG732841
1,2,4-Trimethylbenzene	ppb	3.73	3.69	99.0	70-130	1.12	25	WG732841
1,2-Dibromoethane	ppb	3.58	3.58	96.0	70-130	0.0900	25	WG732841
1,2-Dichlorobenzene	ppb	3.86	3.81	103.	70-130	1.08	25	WG732841
1,2-Dichloroethane	ppb	3.63	3.64	97.0	70-130	0.250	25	WG732841
1,2-Dichloropropane	ppb	3.20	3.11	85.0	70-130	2.94	25	WG732841
1,2-Dichlorotetrafluoroethane	ppb	3.36	3.45	90.0	70-130	2.80	25	WG732841
1,3,5-Trimethylbenzene	ppb	3.65	3.60	97.0	70-130	1.24	25	WG732841
1,3-Butadiene	ppb	4.14	4.17	110.	70-130	0.720	25	WG732841
1,3-Dichlorobenzene	ppb	3.86	3.78	103.	70-130	2.15	25	WG732841
1,4-Dichlorobenzene	ppb	3.85	3.85	103.	70-130	0.0300	25	WG732841
1,4-Dioxane	ppb	3.73	4.03	100.	70-130	7.72	25	WG732841

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Jason Flowers
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Seattle, WA 98101

Quality Assurance Report
Level II

L710967

12065 Lebanon Rd.
Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 24, 2014

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
2,2,4-Trimethylpentane	ppb	3.11	3.21	83.0	70-130	3.25	25	WG732841
2-Butanone (MEK)	ppb	3.34	3.46	89.0	70-130	3.50	25	WG732841
2-Chlorotoluene	ppb	3.73	3.70	100.	70-130	0.980	25	WG732841
2-Propanol	ppb	3.63	3.80	97.0	62.2-137	4.47	25	WG732841
4-Ethyltoluene	ppb	3.61	3.59	96.0	70-130	0.440	25	WG732841
4-Methyl-2-pentanone (MIBK)	ppb	3.40	3.49	90.0	51.3-144	2.59	25	WG732841
Acetone	ppb	3.19	3.36	85.0	70-130	5.17	25	WG732841
Allyl chloride	ppb	2.95	3.16	79.0	70-130	6.59	25	WG732841
Benzene	ppb	3.30	3.28	88.0	70-130	0.730	25	WG732841
Benzyl Chloride	ppb	3.94	3.87	105.	70-130	1.86	25	WG732841
Bromodichloromethane	ppb	3.57	3.51	95.0	70-130	1.93	25	WG732841
Bromoform	ppb	3.93	3.88	105.	70-130	1.26	25	WG732841
Bromomethane	ppb	3.77	3.86	100.	70-130	2.24	25	WG732841
Carbon disulfide	ppb	3.16	3.36	84.0	70-130	6.11	25	WG732841
Carbon tetrachloride	ppb	3.65	3.76	97.0	70-130	2.81	25	WG732841
Chlorobenzene	ppb	3.58	3.61	96.0	70-130	0.660	25	WG732841
Dibromochloromethane	ppb	3.74	3.70	100.	70-130	1.03	25	WG732841
Chloroethane	ppb	3.37	3.46	90.0	70-130	2.46	25	WG732841
Chloroform	ppb	3.48	3.54	93.0	70-130	1.62	25	WG732841
Chloromethane	ppb	3.03	3.07	81.0	70-130	1.27	25	WG732841
cis-1,2-Dichloroethene	ppb	3.30	3.36	88.0	70-130	1.78	25	WG732841
cis-1,3-Dichloropropene	ppb	3.37	3.44	90.0	70-130	1.96	25	WG732841
Cyclohexane	ppb	3.40	3.51	91.0	70-130	3.26	25	WG732841
Dichlorodifluoromethane	ppb	3.13	3.22	83.0	70-130	2.76	25	WG732841
Ethanol	ppb	3.46	3.64	92.0	52.6-145	5.06	25	WG732841
Ethylbenzene	ppb	3.56	3.51	95.0	70-130	1.41	25	WG732841
Heptane	ppb	3.11	3.02	83.0	70-130	3.03	25	WG732841
Hexachloro-1,3-butadiene	ppb	4.44	4.47	118.	55.7-144	0.730	25	WG732841
Isopropylbenzene	ppb	3.49	3.53	93.0	70-130	1.15	25	WG732841
m&p-Xylene	ppb	6.90	6.85	92.0	70-130	0.790	25	WG732841
Methyl Butyl Ketone	ppb	3.60	3.59	96.0	36.5-155	0.220	25	WG732841
Methyl methacrylate	ppb	3.20	3.19	85.0	70-130	0.160	25	WG732841
MTBE	ppb	3.43	3.49	92.0	70-130	1.53	25	WG732841
Methylene Chloride	ppb	2.89	3.08	77.0	70-130	6.12	25	WG732841
n-Hexane	ppb	3.10	3.20	83.0	70-130	2.92	25	WG732841
Naphthalene	ppb	4.31	4.31	115.	53.4-158	0.100	25	WG732841
o-Xylene	ppb	3.47	3.44	92.0	70-130	0.950	25	WG732841
Propene	ppb	2.63	2.94	70.0	70-130	10.9	25	WG732841
Styrene	ppb	3.62	3.55	96.0	70-130	1.94	25	WG732841
Tetrahydrofuran	ppb	3.08	3.32	82.0	70-130	7.48	25	WG732841
Toluene	ppb	3.38	3.50	90.0	70-130	3.68	25	WG732841
trans-1,2-Dichloroethene	ppb	3.26	3.33	87.0	70-130	2.03	25	WG732841
trans-1,3-Dichloropropene	ppb	3.48	3.55	93.0	70-130	2.23	25	WG732841
Trichlorofluoromethane	ppb	3.64	3.77	97.0	70-130	3.47	25	WG732841
Vinyl acetate	ppb	3.10	3.21	83.0	70-130	3.54	25	WG732841
Vinyl Bromide	ppb	3.51	3.61	93.0	70-130	2.82	25	WG732841
Vinyl chloride	ppb	3.96	4.16	106.	70-130	4.90	25	WG732841
1,4-Bromofluorobenzene				96.10	60-140			WG732841
1,1,1-Trichloroethane	ppb	3.71	3.49	99.0	70-130	6.02	25	WG733105
1,1,2,2-Tetrachloroethane	ppb	4.24	3.55	113.	70-130	17.7	25	WG733105
1,1,2-Trichloroethane	ppb	3.89	3.56	104.	70-130	8.88	25	WG733105
1,1,2-Trichlorotrifluoroethane	ppb	3.81	3.62	102.	70-130	5.28	25	WG733105
1,1-Dichloroethane	ppb	3.71	3.49	99.0	70-130	5.91	25	WG733105
1,1-Dichloroethene	ppb	3.53	3.30	94.0	70-130	6.61	25	WG733105
1,2,4-Trichlorobenzene	ppb	4.94	4.01	132.	59.7-155	20.6	25	WG733105
1,2,4-Trimethylbenzene	ppb	4.21	3.50	112.	70-130	18.3	25	WG733105
1,2-Dibromoethane	ppb	3.99	3.65	106.	70-130	8.87	25	WG733105

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 Jason Flowers
 1201 3rd Ave, Suite #330

Seattle, WA 98101

Quality Assurance Report
 Level II

L710967

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 24, 2014

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,2-Dichlorobenzene	ppb	4.26	3.52	114.	70-130	19.2	25	WG733105
1,2-Dichloroethane	ppb	3.42	3.10	91.0	70-130	9.83	25	WG733105
1,2-Dichloropropane	ppb	3.68	3.37	98.0	70-130	8.72	25	WG733105
1,2-Dichlorotetrafluoroethane	ppb	3.57	3.72	95.0	70-130	3.98	25	WG733105
1,3,5-Trimethylbenzene	ppb	4.27	3.55	114.	70-130	18.4	25	WG733105
1,3-Butadiene	ppb	3.18	3.25	85.0	70-130	2.22	25	WG733105
1,3-Dichlorobenzene	ppb	4.29	3.54	114.	70-130	19.2	25	WG733105
1,4-Dichlorobenzene	ppb	4.31	3.58	115.	70-130	18.4	25	WG733105
1,4-Dioxane	ppb	4.46	3.98	119.	70-130	11.4	25	WG733105
2,2,4-Trimethylpentane	ppb	3.62	3.47	96.0	70-130	4.23	25	WG733105
2-Butanone (MEK)	ppb	4.08	3.65	109.	70-130	11.1	25	WG733105
2-Chlorotoluene	ppb	4.04	3.38	108.	70-130	17.9	25	WG733105
2-Propanol	ppb	4.06	3.82	108.	62.2-137	6.00	25	WG733105
4-Ethyltoluene	ppb	4.16	3.49	111.	70-130	17.5	25	WG733105
4-Methyl-2-pentanone (MIBK)	ppb	3.84	3.45	102.	51.3-144	10.8	25	WG733105
Acetone	ppb	3.47	3.25	93.0	70-130	6.76	25	WG733105
Allyl chloride	ppb	3.50	3.32	93.0	70-130	5.28	25	WG733105
Benzene	ppb	3.64	3.35	97.0	70-130	8.06	25	WG733105
Benzyl Chloride	ppb	5.96	4.97	159*	70-130	18.0	25	WG733105
Bromodichloromethane	ppb	3.76	3.44	100.	70-130	8.87	25	WG733105
Bromoform	ppb	4.33	3.64	115.	70-130	17.2	25	WG733105
Bromomethane	ppb	3.86	3.90	103.	70-130	0.880	25	WG733105
Carbon disulfide	ppb	4.06	3.83	108.	70-130	5.79	25	WG733105
Carbon tetrachloride	ppb	3.89	3.60	104.	70-130	7.68	25	WG733105
Chlorobenzene	ppb	3.90	3.56	104.	70-130	8.98	25	WG733105
Dibromochloromethane	ppb	4.13	3.72	110.	70-130	10.3	25	WG733105
Chloroethane	ppb	3.65	3.62	97.0	70-130	0.820	25	WG733105
Chloroform	ppb	3.75	3.51	100.	70-130	6.74	25	WG733105
Chloromethane	ppb	3.47	3.59	92.0	70-130	3.44	25	WG733105
cis-1,2-Dichloroethene	ppb	3.63	3.42	97.0	70-130	6.18	25	WG733105
cis-1,3-Dichloropropene	ppb	3.97	3.61	106.	70-130	9.52	25	WG733105
Cyclohexane	ppb	3.86	3.60	103.	70-130	6.91	25	WG733105
Dichlorodifluoromethane	ppb	2.45	2.72	65*	70-130	10.5	25	WG733105
Ethanol	ppb	4.90	4.37	131.	52.6-145	11.5	25	WG733105
Ethylbenzene	ppb	4.01	3.40	107.	70-130	16.3	25	WG733105
Heptane	ppb	3.33	3.06	89.0	70-130	8.48	25	WG733105
Hexachloro-1,3-butadiene	ppb	4.12	3.39	110.	55.7-144	19.4	25	WG733105
Isopropylbenzene	ppb	4.18	3.48	111.	70-130	18.3	25	WG733105
m&p-Xylene	ppb	7.75	6.60	103.	70-130	16.0	25	WG733105
Methyl Butyl Ketone	ppb	4.22	3.81	112.	36.5-155	10.1	25	WG733105
Methyl methacrylate	ppb	3.22	2.99	86.0	70-130	7.21	25	WG733105
MTBE	ppb	3.75	3.60	100.	70-130	4.22	25	WG733105
Methylene Chloride	ppb	3.31	3.13	88.0	70-130	5.52	25	WG733105
n-Hexane	ppb	3.57	3.39	95.0	70-130	5.32	25	WG733105
Naphthalene	ppb	5.23	4.30	140.	53.4-158	19.5	25	WG733105
o-Xylene	ppb	4.04	3.41	108.	70-130	16.8	25	WG733105
Propene	ppb	3.34	3.50	89.0	70-130	4.53	25	WG733105
Styrene	ppb	4.26	3.59	114.	70-130	17.1	25	WG733105
Tetrachloroethylene	ppb	3.71	3.39	99.0	70-130	9.00	25	WG733105
Tetrahydrofuran	ppb	3.78	3.54	101.	70-130	6.51	25	WG733105
Toluene	ppb	3.77	3.48	100.	70-130	8.04	25	WG733105
trans-1,2-Dichloroethene	ppb	3.66	3.44	98.0	70-130	6.03	25	WG733105
trans-1,3-Dichloropropene	ppb	4.03	3.75	107.	70-130	6.98	25	WG733105
Trichlorofluoromethane	ppb	3.61	3.42	96.0	70-130	5.61	25	WG733105
Vinyl acetate	ppb	3.65	3.45	97.0	70-130	5.76	25	WG733105
Vinyl Bromide	ppb	3.88	3.82	103.	70-130	1.55	25	WG733105
Vinyl chloride	ppb	3.60	3.74	96.0	70-130	3.75	25	WG733105
1,4-Bromofluorobenzene				124.0	60-140			WG733105

* Performance of this Analyte is outside of established criteria.

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 Seattle, WA 98101

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Tetrachloroethylene	ppb	3.81	3.81	102.	70-130	0.0600	25	WG733187
Trichloroethylene	ppb	3.49	3.44	93.0	70-130	1.25	25	WG733187
1,4-Bromofluorobenzene				97.20	60-140			WG733187
Trichloroethylene	ppb	3.18	3.10	85.0	70-130	2.55	25	WG733120
1,4-Bromofluorobenzene				101.0	60-140			WG733120
cis-1,2-Dichloroethene	ppb	3.46	3.40	92.0	70-130	1.70	25	WG733360
Trichloroethylene	ppb	3.35	3.34	89.0	70-130	0.380	25	WG733360
1,4-Bromofluorobenzene				104.0	60-140			WG733360

Batch number /Run number / Sample number cross reference

WG732839: R2966767: L710967-02
 WG732841: R2967047: L710967-01
 WG733105: R2967287: L710967-03 04
 WG733187: R2967345: L710967-01
 WG733120: R2967505: L710967-02
 WG733360: R2967753: L710967-03 04

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Geosyntec - Seattle, WA

1201 3rd Ave, Suite #330
Seattle, WA 98101

Billing Information:

Accounts Payable- Jason Flowers
1201 3rd Ave., Ste. 330
Seattle, WA 98101

Report to:
Jason Flowers

Email To: JFlowers@Geosyntec.com

Project
Description: **Cascade Air Project**

City/State
Collected:

Phone: **206-496-1450**
Fax:

Client Project #

Lab Project #
GEOSYNWA-CASCADE

Collected by (print):
PAT YADON

Site/Facility ID #

P.O. #
PNG 0564 514-02

Collected by (signature):
Patrick E. Yodon

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
STANDARD

Email? ___ No **X** Yes
FAX? ___ No ___ Yes

Immediately
Packed on ice N **X** Y

TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
MW-17dS-071614-168HR	5 min	Air		7/16/14	16:15	1 X
VW-17d-95.5-071614-168HR	5 min	Air		7/16/14	16:33	1 X
VW-17d-75-071614-168HR	5 min	Air		7/16/14	16:45	1 X
VW-17d-42.4-071614-168HR	5 min	Air		7/16/14	17:00	1 X
		Air				1 X
		Air				1 X
		Air				1 X
		Air				1 X
		Air				1 X
		Air				1 X

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **L710967**

J037

Acctnum: **GEOSYNWA**
Template: **T95134**
Prelogin: **P475605**
TSR: **358 - Jarred Willis**
PB:
Shipped Via: **FedEX Ground**

Rem./Contaminant	Sample # (lab only)
	01
	02
	03
	04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: (30) 1L summa cans, (30) sampling manifolds, (5) tedlar bags
6051 2430 6314

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>Patrick E. Yodon</i>	Date: 7/17/14	Time: 10:57	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received by lab by: (Signature) <i>[Signature]</i>

Samples returned via: UPS
 FedEx Courier

Temp: **Amb** °C Bottles Received: **4**

Date: **7/18/14** Time: **0900**

Hold # _____
Condition: **F** (lab use only)
CDC Seal Intact: **Y** **N** **NA**
pH Checked: _____ NCF: _____



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

Jason Flowers
Geosyntec- Seattle, WA
1201 3rd Ave, Suite #330
Seattle, WA 98101

Report Summary

Friday August 22, 2014

Report Number: L712227


Samples Received: 07/25/14

Client Project:

Description: Cascade Air Project

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
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 Mt. Juliet, TN 37122
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 1-800-767-5859
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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project

ESC Sample # : L712227-01

Sample ID : MW17DS-072114-200HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/23/14 12:15

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	11.	26.	TO-15	07/30/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/30/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/30/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/30/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/30/14	2
Chloroform	67-66-3	119	0.400	1.90	< 0.40	< 1.9	TO-15	07/30/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	0.87	1.8	TO-15	07/30/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/30/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Ethanol	64-17-5	46.1	1.26	2.40	13.	25.	TO-15	07/30/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.42	2.1	TO-15	07/30/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/30/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/30/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	15.	53.	TO-15	07/30/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	12.	42.	TO-15	07/30/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project

ESC Sample # : L712227-01

Sample ID : MW17DS-072114-200HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/23/14 12:15

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/30/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/31/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/30/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/30/14	2
Propene	115-07-1	42.1	0.800	1.40	< 0.80	< 1.4	TO-15	07/30/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Toluene	108-88-3	92.1	0.400	1.50	1.4	5.3	TO-15	07/30/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/30/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Trichloroethylene	79-01-6	131	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	1.5	7.4	TO-15	07/30/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	0.49	2.4	TO-15	07/30/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/30/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/30/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/30/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,4-Bromofluorobenzene	460-00-4				100	% Rec.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project

ESC Sample # : L712227-02

Sample ID : VW-17D-072114-200HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/23/14 12:30

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	17.	40.	TO-15	07/30/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/30/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/30/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/30/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/30/14	2
Chloroform	67-66-3	119	0.400	1.90	0.64	3.1	TO-15	07/30/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	2.8	5.8	TO-15	07/30/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/30/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Ethanol	64-17-5	46.1	1.26	2.40	28.	53.	TO-15	07/30/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.47	2.3	TO-15	07/30/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/30/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/30/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	1.4	4.9	TO-15	07/30/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	0.76	2.6	TO-15	07/30/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project

ESC Sample # : L712227-02

Sample ID : VW-17D-072114-200HR

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/23/14 12:30

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/30/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/30/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/30/14	2
Propene	115-07-1	42.1	0.800	1.40	1.7	2.9	TO-15	07/30/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	2.5	7.4	TO-15	07/30/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.88	3.3	TO-15	07/30/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/30/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Trichloroethylene	79-01-6	131	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/30/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/30/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/30/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,4-Bromofluorobenzene	460-00-4				102	% Rec.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project

ESC Sample # : L712227-03

Sample ID : VW-17D-95.5-072314-REBOUND

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/23/14 12:45

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	20.	48.	TO-15	07/30/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzene	71-43-2	78.1	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/30/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/30/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/30/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/30/14	2
Chloroform	67-66-3	119	0.400	1.90	1.6	7.8	TO-15	07/30/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/30/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/30/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	2.4	9.5	TO-15	07/30/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	32.0	130.	79.	310	TO-15	07/30/14	160
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	3.8	15.	TO-15	07/30/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Ethanol	64-17-5	46.1	1.26	2.40	11.	21.	TO-15	07/30/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	2.3	13.	TO-15	07/30/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.93	4.6	TO-15	07/30/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/30/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/30/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	2.6	9.2	TO-15	07/30/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	1.2	4.2	TO-15	07/30/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Fax (615) 758-5859

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-95.5-072314-REBOUND
 Collected By : Pat Yadon
 Collection Date : 07/23/14 12:45

ESC Sample # : L712227-03
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	3.3	9.7	TO-15	07/30/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/30/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/30/14	2
Propene	115-07-1	42.1	0.800	1.40	1.2	2.1	TO-15	07/30/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrachloroethylene	127-18-4	166	32.0	220.	84.	570	TO-15	07/30/14	160
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.48	1.8	TO-15	07/30/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/30/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	0.94	5.1	TO-15	07/30/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Trichloroethylene	79-01-6	131	32.0	170.	1200	6400	TO-15	07/30/14	160
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	0.56	2.7	TO-15	07/30/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/30/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/30/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	2.8	12.	TO-15	07/30/14	2
o-Xylene	95-47-6	106	0.400	1.70	0.64	2.8	TO-15	07/30/14	2
1,4-Bromofluorobenzene	460-00-4				100	% Rec.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-072314-REBOUND
 Collected By : Pat Yadon
 Collection Date : 07/23/14 13:00

ESC Sample # : L712227-04

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	31.	74.	TO-15	07/30/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzene	71-43-2	78.1	0.400	1.30	0.61	1.9	TO-15	07/30/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/30/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/30/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/30/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/30/14	2
Chloroform	67-66-3	119	0.400	1.90	2.2	11.	TO-15	07/30/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/30/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/30/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	1.5	5.9	TO-15	07/30/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	16.0	63.0	67.	270	TO-15	08/01/14	80
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	4.2	17.	TO-15	07/30/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Ethanol	64-17-5	46.1	1.26	2.40	16.	30.	TO-15	07/30/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	2.6	15.	TO-15	07/30/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	1.1	5.4	TO-15	07/30/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/30/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/30/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	1.3	6.4	TO-15	07/30/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	2.7	11.	TO-15	08/01/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
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August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-75-072314-REBOUND
 Collected By : Pat Yadon
 Collection Date : 07/23/14 13:00

ESC Sample # : L712227-04
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	14.	41.	TO-15	07/30/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/30/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	2.5	6.1	TO-15	07/30/14	2
Propene	115-07-1	42.1	0.800	1.40	1.8	3.1	TO-15	07/30/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrachloroethylene	127-18-4	166	16.0	110.	38.	260	TO-15	08/01/14	80
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Toluene	108-88-3	92.1	0.400	1.50	< 0.40	< 1.5	TO-15	07/30/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/30/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	0.72	3.9	TO-15	07/30/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Trichloroethylene	79-01-6	131	16.0	86.0	580	3100	TO-15	08/01/14	80
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/30/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/30/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/30/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,4-Bromofluorobenzene	460-00-4				103	% Rec.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project

ESC Sample # : L712227-05

Sample ID : VW-17D-42.5-072314-REBOUND

Site ID :

Collected By : Pat Yadon
 Collection Date : 07/23/14 13:15

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	15.	36.	TO-15	07/30/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzene	71-43-2	78.1	0.400	1.30	0.50	1.6	TO-15	07/30/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/30/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/30/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/30/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/30/14	2
Chloroform	67-66-3	119	0.400	1.90	1.7	8.3	TO-15	07/30/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	< 0.40	< 0.83	TO-15	07/30/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/30/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	0.400	1.60	73.	290	TO-15	07/30/14	2
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	0.41	1.6	TO-15	07/30/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Ethanol	64-17-5	46.1	1.26	2.40	9.2	17.	TO-15	07/30/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	1.0	4.9	TO-15	07/30/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/30/14	2
Heptane	142-82-5	100	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/30/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	3.1	11.	TO-15	07/30/14	2
Isopropylbenzene	98-82-8	120.2	0.400	2.00	0.87	4.3	TO-15	07/30/14	2
Methylene Chloride	75-09-2	84.9	0.400	1.40	0.97	3.4	TO-15	07/30/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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REPORT OF ANALYSIS

Jason Flowers
 Geosyntec- Seattle, WA
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project
 Sample ID : VW-17D-42.5-072314-REBOUND
 Collected By : Pat Yadon
 Collection Date : 07/23/14 13:15

ESC Sample # : L712227-05
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/30/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2
Methyl methacrylate	80-62-6	100.12	20.0	82.0	29.	120	TO-15	07/31/14	100
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Naphthalene	91-20-3	128	1.26	6.60	< 1.3	< 6.6	TO-15	07/30/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/30/14	2
Propene	115-07-1	42.1	0.800	1.40	0.89	1.5	TO-15	07/30/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrachloroethylene	127-18-4	166	0.400	2.70	19.	130	TO-15	07/30/14	2
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Toluene	108-88-3	92.1	0.400	1.50	0.62	2.3	TO-15	07/30/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/30/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Trichloroethylene	79-01-6	131	20.0	110.	360	1900	TO-15	07/31/14	100
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	0.49	2.4	TO-15	07/30/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	< 0.40	< 2.0	TO-15	07/30/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	< 0.40	< 1.9	TO-15	07/30/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/30/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	< 0.80	< 3.5	TO-15	07/30/14	2
o-Xylene	95-47-6	106	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,4-Bromofluorobenzene	460-00-4				102	% Rec.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Jason Flowers
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 1201 3rd Ave, Suite #330
 Seattle, WA 98101

August 22, 2014

Date Received : July 25, 2014
 Description : Cascade Air Project
 Sample ID : MW-17DS-072314-REBOUND
 Collected By : Pat Yadon
 Collection Date : 07/23/14 13:25

ESC Sample # : L712227-06

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	2.50	5.90	56.	130	TO-15	07/30/14	2
Allyl chloride	107-05-1	76.53	0.400	1.30	< 0.40	< 1.3	TO-15	07/30/14	2
Benzene	71-43-2	78.1	0.400	1.30	35.	110	TO-15	07/30/14	2
Benzyl Chloride	100-44-7	127	0.400	2.10	0.63	3.3	TO-15	07/30/14	2
Bromodichloromethane	75-27-4	164	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Bromoform	75-25-2	253	1.20	12.0	< 1.2	< 12.	TO-15	07/30/14	2
Bromomethane	74-83-9	94.9	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,3-Butadiene	106-99-0	54.1	4.00	8.90	< 4.0	< 8.9	TO-15	07/30/14	2
Carbon disulfide	75-15-0	76.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Carbon tetrachloride	56-23-5	154	0.400	2.50	< 0.40	< 2.5	TO-15	07/30/14	2
Chlorobenzene	108-90-7	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
Chloroethane	75-00-3	64.5	0.400	1.10	< 0.40	< 1.1	TO-15	07/30/14	2
Chloroform	67-66-3	119	0.400	1.90	6.9	34.	TO-15	07/30/14	2
Chloromethane	74-87-3	50.5	0.400	0.830	1.1	2.3	TO-15	07/30/14	2
2-Chlorotoluene	95-49-8	126	0.400	2.10	< 0.40	< 2.1	TO-15	07/30/14	2
Cyclohexane	110-82-7	84.2	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Dibromochloromethane	124-48-1	208	0.400	3.40	< 0.40	< 3.4	TO-15	07/30/14	2
1,2-Dibromoethane	106-93-4	188	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	< 0.40	< 2.4	TO-15	07/30/14	2
1,2-Dichloroethane	107-06-2	99	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethane	75-34-3	98	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
1,1-Dichloroethene	75-35-4	96.9	0.400	1.60	2.9	11.	TO-15	07/30/14	2
cis-1,2-Dichloroethene	156-59-2	96.9	20.0	79.0	42.	170	TO-15	07/31/14	100
trans-1,2-Dichloroethene	156-60-5	96.9	0.400	1.60	3.3	13.	TO-15	07/30/14	2
1,2-Dichloropropane	78-87-5	113	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.80	< 0.40	< 1.8	TO-15	07/30/14	2
1,4-Dioxane	123-91-1	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Ethanol	64-17-5	46.1	1.26	2.40	23.	43.	TO-15	07/30/14	2
Ethylbenzene	100-41-4	106	0.400	1.70	0.58	2.5	TO-15	07/30/14	2
4-Ethyltoluene	622-96-8	120	0.400	2.00	0.53	2.6	TO-15	07/30/14	2
Trichlorofluoromethane	75-69-4	137.4	0.400	2.20	1.8	10.	TO-15	07/30/14	2
Dichlorodifluoromethane	75-71-8	120.92	0.400	2.00	0.78	3.9	TO-15	07/30/14	2
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.400	3.10	< 0.40	< 3.1	TO-15	07/30/14	2
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	< 0.40	< 2.8	TO-15	07/30/14	2
Heptane	142-82-5	100	0.400	1.60	0.68	2.8	TO-15	07/30/14	2
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.0	< 1.3	< 13.	TO-15	07/30/14	2
n-Hexane	110-54-3	86.2	0.400	1.40	2.7	9.5	TO-15	07/30/14	2
Isopropylbenzene	98-82-8	120.2	20.0	98.0	21.	100	TO-15	07/31/14	100
Methylene Chloride	75-09-2	84.9	0.400	1.40	0.95	3.3	TO-15	07/30/14	2
Methyl Butyl Ketone	591-78-6	100	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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Date Received : July 25, 2014
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 Sample ID : MW-17DS-072314-REBOUND
 Collected By : Pat Yadon
 Collection Date : 07/23/14 13:25

ESC Sample # : L712227-06
 Site ID :
 Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	2.50	7.40	< 2.5	< 7.4	TO-15	07/30/14	2
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	2.50	10.0	< 2.5	< 10.	TO-15	07/30/14	2
Methyl methacrylate	80-62-6	100.12	0.400	1.60	< 0.40	< 1.6	TO-15	07/30/14	2
MTBE	1634-04-4	88.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
Naphthalene	91-20-3	128	1.26	6.60	6.6	35.	TO-15	07/30/14	2
2-Propanol	67-63-0	60.1	2.50	6.10	< 2.5	< 6.1	TO-15	07/30/14	2
Propene	115-07-1	42.1	0.800	1.40	2.4	4.1	TO-15	07/30/14	2
Styrene	100-42-5	104	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.70	< 0.40	< 2.7	TO-15	07/30/14	2
Tetrachloroethylene	127-18-4	166	20.0	140.	46.	310	TO-15	07/31/14	100
Tetrahydrofuran	109-99-9	72.1	0.400	1.20	< 0.40	< 1.2	TO-15	07/30/14	2
Toluene	108-88-3	92.1	0.400	1.50	4.4	17.	TO-15	07/30/14	2
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.30	< 1.3	< 9.3	TO-15	07/30/14	2
1,1,1-Trichloroethane	71-55-6	133	0.400	2.20	0.76	4.1	TO-15	07/30/14	2
1,1,2-Trichloroethane	79-00-5	133	0.400	2.20	< 0.40	< 2.2	TO-15	07/30/14	2
Trichloroethylene	79-01-6	131	20.0	110.	580	3100	TO-15	07/31/14	100
1,2,4-Trimethylbenzene	95-63-6	120	0.400	2.00	5.3	26.	TO-15	07/30/14	2
1,3,5-Trimethylbenzene	108-67-8	120	0.400	2.00	1.3	6.4	TO-15	07/30/14	2
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.90	1.6	7.5	TO-15	07/30/14	2
Vinyl chloride	75-01-4	62.5	0.400	1.00	< 0.40	< 1.0	TO-15	07/30/14	2
Vinyl Bromide	593-60-2	106.95	0.400	1.70	< 0.40	< 1.7	TO-15	07/30/14	2
Vinyl acetate	108-05-4	86.1	0.400	1.40	< 0.40	< 1.4	TO-15	07/30/14	2
m&p-Xylene	1330-20-7	106	0.800	3.50	2.1	9.1	TO-15	07/30/14	2
o-Xylene	95-47-6	106	0.400	1.70	1.1	4.8	TO-15	07/30/14	2
1,4-Bromofluorobenzene	460-00-4				105	% Rec.	TO-15	07/30/14	2

RDL1 = ppbv , RDL2 = ug/m3

Note:

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L712227-02	WG734285	SAMP	Propene	R2969533	J3
L712227-03	WG734285	SAMP	1,4-Dioxane	R2969533	L1
	WG734285	SAMP	Propene	R2969533	J3
L712227-04	WG734285	SAMP	1,4-Dioxane	R2969533	L1
	WG734285	SAMP	Propene	R2969533	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
L1	(ESC) The associated batch LCS exceeded the upper control limit, which indicates a high bias; The sample analyte was "not detected" and is therefore unaffected.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
 Jason Flowers
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

Quality Assurance Report
 Level II

L712227

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 22, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1-Trichloroethane	< .2	ppb			WG734285	07/29/14 10:12
1,1,2,2-Tetrachloroethane	< .2	ppb			WG734285	07/29/14 10:12
1,1,2-Trichloroethane	< .2	ppb			WG734285	07/29/14 10:12
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG734285	07/29/14 10:12
1,1-Dichloroethane	< .2	ppb			WG734285	07/29/14 10:12
1,1-Dichloroethene	< .2	ppb			WG734285	07/29/14 10:12
1,2,4-Trichlorobenzene	< .63	ppb			WG734285	07/29/14 10:12
1,2,4-Trimethylbenzene	< .2	ppb			WG734285	07/29/14 10:12
1,2-Dibromoethane	< .2	ppb			WG734285	07/29/14 10:12
1,2-Dichlorobenzene	< .2	ppb			WG734285	07/29/14 10:12
1,2-Dichloroethane	< .2	ppb			WG734285	07/29/14 10:12
1,2-Dichloropropane	< .2	ppb			WG734285	07/29/14 10:12
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG734285	07/29/14 10:12
1,3,5-Trimethylbenzene	< .2	ppb			WG734285	07/29/14 10:12
1,3-Butadiene	< 2	ppb			WG734285	07/29/14 10:12
1,3-Dichlorobenzene	< .2	ppb			WG734285	07/29/14 10:12
1,4-Dichlorobenzene	< .2	ppb			WG734285	07/29/14 10:12
1,4-Dioxane	< .2	ppb			WG734285	07/29/14 10:12
2,2,4-Trimethylpentane	< .2	ppb			WG734285	07/29/14 10:12
2-Butanone (MEK)	< 1.25	ppb			WG734285	07/29/14 10:12
2-Chlorotoluene	< .2	ppb			WG734285	07/29/14 10:12
2-Propanol	< 1.25	ppb			WG734285	07/29/14 10:12
4-Ethyltoluene	< .2	ppb			WG734285	07/29/14 10:12
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG734285	07/29/14 10:12
Acetone	< 1.25	ppb			WG734285	07/29/14 10:12
Allyl chloride	< .2	ppb			WG734285	07/29/14 10:12
Benzene	< .2	ppb			WG734285	07/29/14 10:12
Benzyl Chloride	< .2	ppb			WG734285	07/29/14 10:12
Bromodichloromethane	< .2	ppb			WG734285	07/29/14 10:12
Bromoform	< .6	ppb			WG734285	07/29/14 10:12
Bromomethane	< .2	ppb			WG734285	07/29/14 10:12
Carbon disulfide	< .2	ppb			WG734285	07/29/14 10:12
Carbon tetrachloride	< .2	ppb			WG734285	07/29/14 10:12
Chlorobenzene	< .2	ppb			WG734285	07/29/14 10:12
Dibromochloromethane	< .2	ppb			WG734285	07/29/14 10:12
Chloroethane	< .2	ppb			WG734285	07/29/14 10:12
Chloroform	< .2	ppb			WG734285	07/29/14 10:12
Chloromethane	< .2	ppb			WG734285	07/29/14 10:12
cis-1,2-Dichloroethene	< .2	ppb			WG734285	07/29/14 10:12
cis-1,3-Dichloropropene	< .2	ppb			WG734285	07/29/14 10:12
Cyclohexane	< .2	ppb			WG734285	07/29/14 10:12
Dichlorodifluoromethane	< .2	ppb			WG734285	07/29/14 10:12
Ethanol	< .63	ppb			WG734285	07/29/14 10:12
Ethylbenzene	< .2	ppb			WG734285	07/29/14 10:12
Heptane	< .2	ppb			WG734285	07/29/14 10:12
Hexachloro-1,3-butadiene	< .63	ppb			WG734285	07/29/14 10:12
Isopropylbenzene	< .2	ppb			WG734285	07/29/14 10:12
m&p-Xylene	< .4	ppb			WG734285	07/29/14 10:12
Methyl Butyl Ketone	< 1.25	ppb			WG734285	07/29/14 10:12
Methyl methacrylate	< .2	ppb			WG734285	07/29/14 10:12
MTBE	< .2	ppb			WG734285	07/29/14 10:12
Methylene Chloride	< .2	ppb			WG734285	07/29/14 10:12
n-Hexane	< .2	ppb			WG734285	07/29/14 10:12
Naphthalene	< .63	ppb			WG734285	07/29/14 10:12
o-Xylene	< .2	ppb			WG734285	07/29/14 10:12
Propene	< .4	ppb			WG734285	07/29/14 10:12
Styrene	< .2	ppb			WG734285	07/29/14 10:12
Tetrachloroethylene	< .2	ppb			WG734285	07/29/14 10:12
Tetrahydrofuran	< .2	ppb			WG734285	07/29/14 10:12

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Est. 1970

August 22, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .2	ppb			WG734285	07/29/14 10:12
trans-1,2-Dichloroethene	< .2	ppb			WG734285	07/29/14 10:12
trans-1,3-Dichloropropene	< .2	ppb			WG734285	07/29/14 10:12
Trichloroethylene	< .2	ppb			WG734285	07/29/14 10:12
Trichlorofluoromethane	< .2	ppb			WG734285	07/29/14 10:12
Vinyl acetate	< .2	ppb			WG734285	07/29/14 10:12
Vinyl Bromide	< .2	ppb			WG734285	07/29/14 10:12
Vinyl chloride	< .2	ppb			WG734285	07/29/14 10:12
1,4-Bromofluorobenzene		% Rec.	98.30	60-140	WG734285	07/29/14 10:12
1,1,1-Trichloroethane	< .2	ppb			WG734307	07/30/14 00:22
1,1,2,2-Tetrachloroethane	< .2	ppb			WG734307	07/30/14 00:22
1,1,2-Trichloroethane	< .2	ppb			WG734307	07/30/14 00:22
1,1,2-Trichlorotrifluoroethane	< .2	ppb			WG734307	07/30/14 00:22
1,1-Dichloroethane	< .2	ppb			WG734307	07/30/14 00:22
1,1-Dichloroethene	< .2	ppb			WG734307	07/30/14 00:22
1,2,4-Trichlorobenzene	< .63	ppb			WG734307	07/30/14 00:22
1,2,4-Trimethylbenzene	< .2	ppb			WG734307	07/30/14 00:22
1,2-Dibromoethane	< .2	ppb			WG734307	07/30/14 00:22
1,2-Dichlorobenzene	< .2	ppb			WG734307	07/30/14 00:22
1,2-Dichloroethane	< .2	ppb			WG734307	07/30/14 00:22
1,2-Dichloropropane	< .2	ppb			WG734307	07/30/14 00:22
1,2-Dichlorotetrafluoroethane	< .2	ppb			WG734307	07/30/14 00:22
1,3,5-Trimethylbenzene	< .2	ppb			WG734307	07/30/14 00:22
1,3-Butadiene	< 2	ppb			WG734307	07/30/14 00:22
1,3-Dichlorobenzene	< .2	ppb			WG734307	07/30/14 00:22
1,4-Dichlorobenzene	< .2	ppb			WG734307	07/30/14 00:22
1,4-Dioxane	< .2	ppb			WG734307	07/30/14 00:22
2,2,4-Trimethylpentane	< .2	ppb			WG734307	07/30/14 00:22
2-Butanone (MEK)	< 1.25	ppb			WG734307	07/30/14 00:22
2-Chlorotoluene	< .2	ppb			WG734307	07/30/14 00:22
2-Propanol	< 1.25	ppb			WG734307	07/30/14 00:22
4-Ethyltoluene	< .2	ppb			WG734307	07/30/14 00:22
4-Methyl-2-pentanone (MIBK)	< 1.25	ppb			WG734307	07/30/14 00:22
Acetone	< 1.25	ppb			WG734307	07/30/14 00:22
Allyl chloride	< .2	ppb			WG734307	07/30/14 00:22
Benzene	< .2	ppb			WG734307	07/30/14 00:22
Benzyl Chloride	< .2	ppb			WG734307	07/30/14 00:22
Bromodichloromethane	< .2	ppb			WG734307	07/30/14 00:22
Bromoform	< .6	ppb			WG734307	07/30/14 00:22
Bromomethane	< .2	ppb			WG734307	07/30/14 00:22
Carbon disulfide	< .2	ppb			WG734307	07/30/14 00:22
Carbon tetrachloride	< .2	ppb			WG734307	07/30/14 00:22
Chlorobenzene	< .2	ppb			WG734307	07/30/14 00:22
Dibromochloromethane	< .2	ppb			WG734307	07/30/14 00:22
Chloroethane	< .2	ppb			WG734307	07/30/14 00:22
Chloroform	< .2	ppb			WG734307	07/30/14 00:22
Chloromethane	< .2	ppb			WG734307	07/30/14 00:22
cis-1,2-Dichloroethene	< .2	ppb			WG734307	07/30/14 00:22
cis-1,3-Dichloropropene	< .2	ppb			WG734307	07/30/14 00:22
Cyclohexane	< .2	ppb			WG734307	07/30/14 00:22
Dichlorodifluoromethane	< .2	ppb			WG734307	07/30/14 00:22
Ethanol	< .63	ppb			WG734307	07/30/14 00:22
Ethylbenzene	< .2	ppb			WG734307	07/30/14 00:22
Heptane	< .2	ppb			WG734307	07/30/14 00:22
Hexachloro-1,3-butadiene	< .63	ppb			WG734307	07/30/14 00:22
Isopropylbenzene	< .2	ppb			WG734307	07/30/14 00:22
m&p-Xylene	< .4	ppb			WG734307	07/30/14 00:22

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Est. 1970

August 22, 2014

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Methyl Butyl Ketone	< 1.25	ppb			WG734307	07/30/14 00:22
Methyl methacrylate	< .2	ppb			WG734307	07/30/14 00:22
MTBE	< .2	ppb			WG734307	07/30/14 00:22
Methylene Chloride	< .2	ppb			WG734307	07/30/14 00:22
n-Hexane	< .2	ppb			WG734307	07/30/14 00:22
Naphthalene	< .63	ppb			WG734307	07/30/14 00:22
o-Xylene	< .2	ppb			WG734307	07/30/14 00:22
Propene	< .4	ppb			WG734307	07/30/14 00:22
Styrene	< .2	ppb			WG734307	07/30/14 00:22
Tetrachloroethylene	< .2	ppb			WG734307	07/30/14 00:22
Tetrahydrofuran	< .2	ppb			WG734307	07/30/14 00:22
Toluene	< .2	ppb			WG734307	07/30/14 00:22
trans-1,2-Dichloroethene	< .2	ppb			WG734307	07/30/14 00:22
trans-1,3-Dichloropropene	< .2	ppb			WG734307	07/30/14 00:22
Trichloroethylene	< .2	ppb			WG734307	07/30/14 00:22
Trichlorofluoromethane	< .2	ppb			WG734307	07/30/14 00:22
Vinyl acetate	< .2	ppb			WG734307	07/30/14 00:22
Vinyl Bromide	< .2	ppb			WG734307	07/30/14 00:22
Vinyl chloride	< .2	ppb			WG734307	07/30/14 00:22
1,4-Bromofluorobenzene		% Rec.	99.00	60-140	WG734307	07/30/14 00:22
cis-1,2-Dichloroethene	< .2	ppb			WG734478	07/30/14 09:24
Tetrachloroethylene	< .2	ppb			WG734478	07/30/14 09:24
Trichloroethylene	< .2	ppb			WG734478	07/30/14 09:24
1,4-Bromofluorobenzene		% Rec.	96.90	60-140	WG734478	07/30/14 09:24
1,4-Dioxane	< .2	ppb			WG734671	07/30/14 20:01
1,4-Bromofluorobenzene		% Rec.	99.20	60-140	WG734671	07/30/14 20:01
cis-1,2-Dichloroethene	< .2	ppb			WG734755	07/31/14 13:28
Isopropylbenzene	< .2	ppb			WG734755	07/31/14 13:28
Methyl methacrylate	< .2	ppb			WG734755	07/31/14 13:28
Tetrachloroethylene	< .2	ppb			WG734755	07/31/14 13:28
Trichloroethylene	< .2	ppb			WG734755	07/31/14 13:28
1,4-Bromofluorobenzene		% Rec.	99.80	60-140	WG734755	07/31/14 13:28
Methyl Butyl Ketone	< 1.25	ppb			WG734873	07/31/14 19:11
1,4-Bromofluorobenzene		% Rec.	97.40	60-140	WG734873	07/31/14 19:11
cis-1,2-Dichloroethene	< .2	ppb			WG735009	08/01/14 12:11
Tetrachloroethylene	< .2	ppb			WG735009	08/01/14 12:11
Trichloroethylene	< .2	ppb			WG735009	08/01/14 12:11
1,4-Bromofluorobenzene		% Rec.	95.30	60-140	WG735009	08/01/14 12:11

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	ppb	3.75	4.06	108.	70-130	WG734285
1,1,2,2-Tetrachloroethane	ppb	3.75	4.24	113.	70-130	WG734285
1,1,2-Trichloroethane	ppb	3.75	4.04	108.	70-130	WG734285
1,1,2-Trichlorotrifluoroethane	ppb	3.75	4.16	111.	70-130	WG734285
1,1-Dichloroethane	ppb	3.75	4.14	110.	70-130	WG734285
1,1-Dichloroethene	ppb	3.75	3.99	107.	70-130	WG734285
1,2,4-Trichlorobenzene	ppb	3.75	3.80	101.	59.7-155	WG734285

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4-Trimethylbenzene	ppb	3.75	4.17	111.	70-130	WG734285
1,2-Dibromoethane	ppb	3.75	4.18	112.	70-130	WG734285
1,2-Dichlorobenzene	ppb	3.75	4.17	111.	70-130	WG734285
1,2-Dichloroethane	ppb	3.75	3.90	104.	70-130	WG734285
1,2-Dichloropropane	ppb	3.75	4.10	109.	70-130	WG734285
1,2-Dichlorotetrafluoroethane	ppb	3.75	4.05	108.	70-130	WG734285
1,3,5-Trimethylbenzene	ppb	3.75	4.08	109.	70-130	WG734285
1,3-Butadiene	ppb	3.75	4.02	107.	70-130	WG734285
1,3-Dichlorobenzene	ppb	3.75	4.15	111.	70-130	WG734285
1,4-Dichlorobenzene	ppb	3.75	4.15	111.	70-130	WG734285
1,4-Dioxane	ppb	3.75	6.15	164.*	70-130	WG734285
2,2,4-Trimethylpentane	ppb	3.75	4.13	110.	70-130	WG734285
2-Butanone (MEK)	ppb	3.75	4.07	108.	70-130	WG734285
2-Chlorotoluene	ppb	3.75	4.01	107.	70-130	WG734285
2-Propanol	ppb	3.75	5.08	135.	62.2-137	WG734285
4-Ethyltoluene	ppb	3.75	4.11	110.	70-130	WG734285
4-Methyl-2-pentanone (MIBK)	ppb	3.75	4.76	127.	51.3-144	WG734285
Acetone	ppb	3.75	3.68	98.0	70-130	WG734285
Allyl chloride	ppb	3.75	4.08	109.	70-130	WG734285
Benzene	ppb	3.75	4.20	112.	70-130	WG734285
Benzyl Chloride	ppb	3.75	4.09	109.	70-130	WG734285
Bromodichloromethane	ppb	3.75	4.06	108.	70-130	WG734285
Bromoform	ppb	3.75	4.60	123.	70-130	WG734285
Bromomethane	ppb	3.75	4.07	109.	70-130	WG734285
Carbon disulfide	ppb	3.75	4.24	113.	70-130	WG734285
Carbon tetrachloride	ppb	3.75	4.15	111.	70-130	WG734285
Chlorobenzene	ppb	3.75	4.07	109.	70-130	WG734285
Dibromochloromethane	ppb	3.75	4.11	110.	70-130	WG734285
Chloroethane	ppb	3.75	4.13	110.	70-130	WG734285
Chloroform	ppb	3.75	4.19	112.	70-130	WG734285
Chloromethane	ppb	3.75	4.03	107.	70-130	WG734285
cis-1,2-Dichloroethene	ppb	3.75	4.11	110.	70-130	WG734285
cis-1,3-Dichloropropene	ppb	3.75	4.19	112.	70-130	WG734285
Cyclohexane	ppb	3.75	4.17	111.	70-130	WG734285
Dichlorodifluoromethane	ppb	3.75	3.87	103.	70-130	WG734285
Ethanol	ppb	3.75	4.71	126.	52.6-145	WG734285
Ethylbenzene	ppb	3.75	4.08	109.	70-130	WG734285
Heptane	ppb	3.75	3.98	106.	70-130	WG734285
Hexachloro-1,3-butadiene	ppb	3.75	4.23	113.	55.7-144	WG734285
Isopropylbenzene	ppb	3.75	4.04	108.	70-130	WG734285
m&p-Xylene	ppb	7.5	7.92	106.	70-130	WG734285
Methyl Butyl Ketone	ppb	3.75	5.34	142.	36.5-155	WG734285
Methyl methacrylate	ppb	3.75	3.95	105.	70-130	WG734285
MTBE	ppb	3.75	4.18	111.	70-130	WG734285
Methylene Chloride	ppb	3.75	3.87	103.	70-130	WG734285
n-Hexane	ppb	3.75	4.15	111.	70-130	WG734285
Naphthalene	ppb	3.75	4.23	113.	53.4-158	WG734285
o-Xylene	ppb	3.75	4.04	108.	70-130	WG734285
Propene	ppb	3.75	2.72	72.4	70-130	WG734285
Styrene	ppb	3.75	4.22	113.	70-130	WG734285
Tetrachloroethylene	ppb	3.75	3.89	104.	70-130	WG734285
Tetrahydrofuran	ppb	3.75	4.47	119.	70-130	WG734285
Toluene	ppb	3.75	4.00	107.	70-130	WG734285
trans-1,2-Dichloroethene	ppb	3.75	4.04	108.	70-130	WG734285
trans-1,3-Dichloropropene	ppb	3.75	4.25	113.	70-130	WG734285
Trichloroethylene	ppb	3.75	4.16	111.	70-130	WG734285
Trichlorofluoromethane	ppb	3.75	3.95	105.	70-130	WG734285
Vinyl acetate	ppb	3.75	4.38	117.	70-130	WG734285
Vinyl Bromide	ppb	3.75	4.16	111.	70-130	WG734285

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Vinyl chloride	ppb	3.75	4.08	109.	70-130	WG734285
1,4-Bromofluorobenzene				102.0	60-140	WG734285
1,1,1-Trichloroethane	ppb	3.75	3.88	104.	70-130	WG734307
1,1,2-Tetrachloroethane	ppb	3.75	4.24	113.	70-130	WG734307
1,1,2-Trichloroethane	ppb	3.75	4.11	110.	70-130	WG734307
1,1,2-Trichlorotrifluoroethane	ppb	3.75	4.08	109.	70-130	WG734307
1,1-Dichloroethane	ppb	3.75	4.14	110.	70-130	WG734307
1,1-Dichloroethene	ppb	3.75	4.10	109.	70-130	WG734307
1,2,4-Trichlorobenzene	ppb	3.75	3.70	98.7	59.7-155	WG734307
1,2,4-Trimethylbenzene	ppb	3.75	4.11	109.	70-130	WG734307
1,2-Dibromoethane	ppb	3.75	3.96	106.	70-130	WG734307
1,2-Dichlorobenzene	ppb	3.75	4.07	108.	70-130	WG734307
1,2-Dichloroethane	ppb	3.75	3.86	103.	70-130	WG734307
1,2-Dichloropropane	ppb	3.75	4.25	113.	70-130	WG734307
1,2-Dichlorotetrafluoroethane	ppb	3.75	3.98	106.	70-130	WG734307
1,3,5-Trimethylbenzene	ppb	3.75	4.12	110.	70-130	WG734307
1,3-Butadiene	ppb	3.75	4.04	108.	70-130	WG734307
1,3-Dichlorobenzene	ppb	3.75	4.18	111.	70-130	WG734307
1,4-Dichlorobenzene	ppb	3.75	4.15	111.	70-130	WG734307
1,4-Dioxane	ppb	3.75	3.99	107.	70-130	WG734307
2,2,4-Trimethylpentane	ppb	3.75	4.23	113.	70-130	WG734307
2-Butanone (MEK)	ppb	3.75	4.20	112.	70-130	WG734307
2-Chlorotoluene	ppb	3.75	4.11	109.	70-130	WG734307
2-Propanol	ppb	3.75	4.51	120.	62.2-137	WG734307
4-Ethyltoluene	ppb	3.75	4.02	107.	70-130	WG734307
4-Methyl-2-pentanone (MIBK)	ppb	3.75	4.39	117.	51.3-144	WG734307
Acetone	ppb	3.75	3.89	104.	70-130	WG734307
Allyl chloride	ppb	3.75	4.38	117.	70-130	WG734307
Benzene	ppb	3.75	4.09	109.	70-130	WG734307
Benzyl Chloride	ppb	3.75	4.56	122.	70-130	WG734307
Bromodichloromethane	ppb	3.75	3.95	105.	70-130	WG734307
Bromoform	ppb	3.75	4.04	108.	70-130	WG734307
Bromomethane	ppb	3.75	4.01	107.	70-130	WG734307
Carbon disulfide	ppb	3.75	3.97	106.	70-130	WG734307
Carbon tetrachloride	ppb	3.75	3.91	104.	70-130	WG734307
Chlorobenzene	ppb	3.75	3.97	106.	70-130	WG734307
Dibromochloromethane	ppb	3.75	3.94	105.	70-130	WG734307
Chloroethane	ppb	3.75	4.43	118.	70-130	WG734307
Chloroform	ppb	3.75	3.99	106.	70-130	WG734307
Chloromethane	ppb	3.75	4.35	116.	70-130	WG734307
cis-1,2-Dichloroethene	ppb	3.75	4.07	108.	70-130	WG734307
cis-1,3-Dichloropropene	ppb	3.75	4.12	110.	70-130	WG734307
Cyclohexane	ppb	3.75	4.08	109.	70-130	WG734307
Dichlorodifluoromethane	ppb	3.75	4.34	116.	70-130	WG734307
Ethanol	ppb	3.75	3.99	106.	52.6-145	WG734307
Ethylbenzene	ppb	3.75	4.13	110.	70-130	WG734307
Heptane	ppb	3.75	4.36	116.	70-130	WG734307
Hexachloro-1,3-butadiene	ppb	3.75	4.03	107.	55.7-144	WG734307
Isopropylbenzene	ppb	3.75	4.11	109.	70-130	WG734307
m&p-Xylene	ppb	7.5	8.22	110.	70-130	WG734307
Methyl Butyl Ketone	ppb	3.75	4.78	128.	36.5-155	WG734307
Methyl methacrylate	ppb	3.75	3.94	105.	70-130	WG734307
MTBE	ppb	3.75	4.10	109.	70-130	WG734307
Methylene Chloride	ppb	3.75	4.01	107.	70-130	WG734307
n-Hexane	ppb	3.75	4.35	116.	70-130	WG734307
Naphthalene	ppb	3.75	3.86	103.	53.4-158	WG734307
o-Xylene	ppb	3.75	4.11	110.	70-130	WG734307

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 Seattle, WA 98101

Quality Assurance Report
 Level II

L712227

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 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 22, 2014

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Propene	ppb	3.75	4.27	114.	70-130	WG734307
Styrene	ppb	3.75	4.29	114.	70-130	WG734307
Tetrachloroethylene	ppb	3.75	3.81	102.	70-130	WG734307
Tetrahydrofuran	ppb	3.75	4.41	118.	70-130	WG734307
Toluene	ppb	3.75	3.98	106.	70-130	WG734307
trans-1,2-Dichloroethene	ppb	3.75	4.05	108.	70-130	WG734307
trans-1,3-Dichloropropene	ppb	3.75	4.09	109.	70-130	WG734307
Trichloroethylene	ppb	3.75	4.06	108.	70-130	WG734307
Trichlorofluoromethane	ppb	3.75	3.90	104.	70-130	WG734307
Vinyl acetate	ppb	3.75	4.45	119.	70-130	WG734307
Vinyl Bromide	ppb	3.75	4.07	109.	70-130	WG734307
Vinyl chloride	ppb	3.75	4.18	111.	70-130	WG734307
1,4-Bromofluorobenzene				104.0	60-140	WG734307
cis-1,2-Dichloroethene	ppb	3.75	4.10	109.	70-130	WG734478
Tetrachloroethylene	ppb	3.75	3.94	105.	70-130	WG734478
Trichloroethylene	ppb	3.75	4.05	108.	70-130	WG734478
1,4-Bromofluorobenzene				101.0	60-140	WG734478
1,4-Dioxane	ppb	3.75	4.17	111.	70-130	WG734671
1,4-Bromofluorobenzene				100.0	60-140	WG734671
cis-1,2-Dichloroethene	ppb	3.75	4.29	115.	70-130	WG734755
Isopropylbenzene	ppb	3.75	4.23	113.	70-130	WG734755
Methyl methacrylate	ppb	3.75	3.76	100.	70-130	WG734755
Tetrachloroethylene	ppb	3.75	3.99	106.	70-130	WG734755
Trichloroethylene	ppb	3.75	4.28	114.	70-130	WG734755
1,4-Bromofluorobenzene				102.0	60-140	WG734755
Methyl Butyl Ketone	ppb	3.75	4.57	122.	36.5-155	WG734873
1,4-Bromofluorobenzene				102.0	60-140	WG734873
cis-1,2-Dichloroethene	ppb	3.75	3.51	93.6	70-130	WG735009
Tetrachloroethylene	ppb	3.75	3.35	89.4	70-130	WG735009
Trichloroethylene	ppb	3.75	3.26	86.9	70-130	WG735009
1,4-Bromofluorobenzene				114.0	60-140	WG735009

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1-Trichloroethane	ppb	4.06	4.06	108.	70-130	0.140	25	WG734285
1,1,2,2-Tetrachloroethane	ppb	4.18	4.24	112.	70-130	1.34	25	WG734285
1,1,2-Trichloroethane	ppb	4.09	4.04	109.	70-130	1.34	25	WG734285
1,1,2-Trichlorotrifluoroethane	ppb	4.18	4.16	111.	70-130	0.510	25	WG734285
1,1-Dichloroethane	ppb	4.18	4.14	111.	70-130	0.800	25	WG734285
1,1-Dichloroethene	ppb	4.07	3.99	108.	70-130	1.86	25	WG734285
1,2,4-Trichlorobenzene	ppb	3.14	3.80	84.0	59.7-155	19.0	25	WG734285
1,2,4-Trimethylbenzene	ppb	4.00	4.17	107.	70-130	4.08	25	WG734285
1,2-Dibromoethane	ppb	4.15	4.18	111.	70-130	0.720	25	WG734285
1,2-Dichlorobenzene	ppb	4.00	4.17	107.	70-130	4.23	25	WG734285
1,2-Dichloroethane	ppb	3.83	3.90	102.	70-130	1.76	25	WG734285
1,2-Dichloropropane	ppb	4.05	4.10	108.	70-130	1.30	25	WG734285
1,2-Dichlorotetrafluoroethane	ppb	3.88	4.05	104.	70-130	4.21	25	WG734285
1,3,5-Trimethylbenzene	ppb	3.84	4.08	102.	70-130	6.20	25	WG734285

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,3-Butadiene	ppb	3.83	4.02	102.	70-130	4.93	25	WG734285
1,3-Dichlorobenzene	ppb	3.90	4.15	104.	70-130	6.05	25	WG734285
1,4-Dichlorobenzene	ppb	3.86	4.15	103.	70-130	7.11	25	WG734285
1,4-Dioxane	ppb	5.64	6.15	150*	70-130	8.65	25	WG734285
2,2,4-Trimethylpentane	ppb	4.14	4.13	110.	70-130	0.370	25	WG734285
2-Butanone (MEK)	ppb	4.11	4.07	110.	70-130	1.01	25	WG734285
2-Chlorotoluene	ppb	3.92	4.01	105.	70-130	2.13	25	WG734285
2-Propanol	ppb	4.96	5.08	132.	62.2-137	2.40	25	WG734285
4-Ethyltoluene	ppb	4.01	4.11	107.	70-130	2.41	25	WG734285
4-Methyl-2-pentanone (MIBK)	ppb	4.69	4.76	125.	51.3-144	1.42	25	WG734285
Acetone	ppb	3.66	3.68	98.0	70-130	0.320	25	WG734285
Allyl chloride	ppb	4.12	4.08	110.	70-130	0.990	25	WG734285
Benzene	ppb	4.12	4.20	110.	70-130	1.85	25	WG734285
Benzyl Chloride	ppb	3.83	4.09	102.	70-130	6.40	25	WG734285
Bromodichloromethane	ppb	4.06	4.06	108.	70-130	0.0100	25	WG734285
Bromoform	ppb	4.46	4.60	119.	70-130	3.14	25	WG734285
Bromomethane	ppb	4.02	4.07	107.	70-130	1.17	25	WG734285
Carbon disulfide	ppb	4.32	4.24	115.	70-130	1.78	25	WG734285
Carbon tetrachloride	ppb	4.08	4.15	109.	70-130	1.54	25	WG734285
Chlorobenzene	ppb	4.10	4.07	109.	70-130	0.620	25	WG734285
Dibromochloromethane	ppb	4.09	4.11	109.	70-130	0.590	25	WG734285
Chloroethane	ppb	4.09	4.13	109.	70-130	0.740	25	WG734285
Chloroform	ppb	4.16	4.19	111.	70-130	0.870	25	WG734285
Chloromethane	ppb	3.89	4.03	104.	70-130	3.64	25	WG734285
cis-1,2-Dichloroethene	ppb	4.12	4.11	110.	70-130	0.260	25	WG734285
cis-1,3-Dichloropropene	ppb	4.17	4.19	111.	70-130	0.470	25	WG734285
Cyclohexane	ppb	4.22	4.17	112.	70-130	1.15	25	WG734285
Dichlorodifluoromethane	ppb	3.54	3.87	94.0	70-130	8.80	25	WG734285
Ethanol	ppb	4.85	4.71	129.	52.6-145	3.04	25	WG734285
Ethylbenzene	ppb	4.02	4.08	107.	70-130	1.72	25	WG734285
Heptane	ppb	3.91	3.98	104.	70-130	1.95	25	WG734285
Hexachloro-1,3-butadiene	ppb	3.82	4.23	102.	55.7-144	10.2	25	WG734285
Isopropylbenzene	ppb	4.00	4.04	107.	70-130	0.970	25	WG734285
m&p-Xylene	ppb	7.83	7.92	104.	70-130	1.24	25	WG734285
Methyl Butyl Ketone	ppb	5.16	5.34	138.	36.5-155	3.43	25	WG734285
Methyl methacrylate	ppb	3.84	3.95	102.	70-130	2.99	25	WG734285
MTBE	ppb	4.32	4.18	115.	70-130	3.37	25	WG734285
Methylene Chloride	ppb	3.81	3.87	102.	70-130	1.48	25	WG734285
n-Hexane	ppb	4.18	4.15	112.	70-130	0.730	25	WG734285
Naphthalene	ppb	3.57	4.23	95.0	53.4-158	16.8	25	WG734285
o-Xylene	ppb	4.02	4.04	107.	70-130	0.520	25	WG734285
Propene	ppb	3.87	2.72	103.	70-130	35.1*	25	WG734285
Styrene	ppb	4.14	4.22	110.	70-130	2.04	25	WG734285
Tetrachloroethylene	ppb	3.90	3.89	104.	70-130	0.240	25	WG734285
Tetrahydrofuran	ppb	4.47	4.47	119.	70-130	0.110	25	WG734285
Toluene	ppb	4.04	4.00	108.	70-130	0.840	25	WG734285
trans-1,2-Dichloroethene	ppb	4.08	4.04	109.	70-130	0.950	25	WG734285
trans-1,3-Dichloropropene	ppb	4.21	4.25	112.	70-130	0.960	25	WG734285
Trichloroethylene	ppb	4.13	4.16	110.	70-130	0.600	25	WG734285
Trichlorofluoromethane	ppb	4.03	3.95	107.	70-130	1.96	25	WG734285
Vinyl acetate	ppb	4.34	4.38	116.	70-130	1.07	25	WG734285
Vinyl Bromide	ppb	4.12	4.16	110.	70-130	0.890	25	WG734285
Vinyl chloride	ppb	3.95	4.08	105.	70-130	3.05	25	WG734285
1,4-Bromofluorobenzene				99.90	60-140			WG734285
1,1,1-Trichloroethane	ppb	4.09	3.88	109.	70-130	5.23	25	WG734307
1,1,2,2-Tetrachloroethane	ppb	4.20	4.24	112.	70-130	1.05	25	WG734307
1,1,2-Trichloroethane	ppb	4.15	4.11	111.	70-130	0.960	25	WG734307

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	ppb	4.24	4.08	113.	70-130	3.79	25	WG734307
1,1-Dichloroethane	ppb	4.22	4.14	113.	70-130	1.98	25	WG734307
1,1-Dichloroethene	ppb	4.25	4.10	113.	70-130	3.52	25	WG734307
1,2,4-Trichlorobenzene	ppb	3.79	3.70	101.	59.7-155	2.29	25	WG734307
1,2,4-Trimethylbenzene	ppb	4.15	4.11	111.	70-130	1.04	25	WG734307
1,2-Dibromoethane	ppb	4.05	3.96	108.	70-130	2.01	25	WG734307
1,2-Dichlorobenzene	ppb	4.18	4.07	111.	70-130	2.79	25	WG734307
1,2-Dichloroethane	ppb	4.15	3.86	111.	70-130	7.35	25	WG734307
1,2-Dichloropropane	ppb	4.26	4.25	113.	70-130	0.150	25	WG734307
1,2-Dichlorotetrafluoroethane	ppb	4.16	3.98	111.	70-130	4.20	25	WG734307
1,3,5-Trimethylbenzene	ppb	4.21	4.12	112.	70-130	2.06	25	WG734307
1,3-Butadiene	ppb	4.26	4.04	114.	70-130	5.35	25	WG734307
1,3-Dichlorobenzene	ppb	4.24	4.18	113.	70-130	1.40	25	WG734307
1,4-Dichlorobenzene	ppb	4.29	4.15	114.	70-130	3.20	25	WG734307
1,4-Dioxane	ppb	3.94	3.99	105.	70-130	1.27	25	WG734307
2,2,4-Trimethylpentane	ppb	4.22	4.23	112.	70-130	0.110	25	WG734307
2-Butanone (MEK)	ppb	4.30	4.20	115.	70-130	2.37	25	WG734307
2-Chlorotoluene	ppb	4.28	4.11	114.	70-130	4.12	25	WG734307
2-Propanol	ppb	4.50	4.51	120.	62.2-137	0.160	25	WG734307
4-Ethyltoluene	ppb	4.14	4.02	110.	70-130	2.87	25	WG734307
4-Methyl-2-pentanone (MIBK)	ppb	4.52	4.39	121.	51.3-144	3.00	25	WG734307
Acetone	ppb	3.91	3.89	104.	70-130	0.560	25	WG734307
Allyl chloride	ppb	4.35	4.38	116.	70-130	0.620	25	WG734307
Benzene	ppb	4.18	4.09	111.	70-130	2.19	25	WG734307
Benzyl Chloride	ppb	4.68	4.56	125.	70-130	2.57	25	WG734307
Bromodichloromethane	ppb	4.18	3.95	112.	70-130	5.64	25	WG734307
Bromoform	ppb	4.07	4.04	109.	70-130	0.790	25	WG734307
Bromomethane	ppb	4.15	4.01	111.	70-130	3.60	25	WG734307
Carbon disulfide	ppb	4.07	3.97	109.	70-130	2.67	25	WG734307
Carbon tetrachloride	ppb	4.09	3.91	109.	70-130	4.54	25	WG734307
Chlorobenzene	ppb	4.19	3.97	112.	70-130	5.48	25	WG734307
Dibromochloromethane	ppb	4.18	3.94	112.	70-130	6.12	25	WG734307
Chloroethane	ppb	4.49	4.43	120.	70-130	1.40	25	WG734307
Chloroform	ppb	4.10	3.99	109.	70-130	2.74	25	WG734307
Chloromethane	ppb	4.40	4.35	117.	70-130	1.22	25	WG734307
cis-1,2-Dichloroethene	ppb	4.22	4.07	113.	70-130	3.77	25	WG734307
cis-1,3-Dichloropropene	ppb	4.30	4.12	114.	70-130	4.19	25	WG734307
Cyclohexane	ppb	4.17	4.08	111.	70-130	2.11	25	WG734307
Dichlorodifluoromethane	ppb	4.40	4.34	117.	70-130	1.36	25	WG734307
Ethanol	ppb	4.37	3.99	117.	52.6-145	9.13	25	WG734307
Ethylbenzene	ppb	4.20	4.13	112.	70-130	1.64	25	WG734307
Heptane	ppb	4.41	4.36	118.	70-130	1.20	25	WG734307
Hexachloro-1,3-butadiene	ppb	4.06	4.03	108.	55.7-144	0.810	25	WG734307
Isopropylbenzene	ppb	4.13	4.11	110.	70-130	0.540	25	WG734307
m&p-Xylene	ppb	8.23	8.22	110.	70-130	0.140	25	WG734307
Methyl Butyl Ketone	ppb	4.82	4.78	128.	36.5-155	0.640	25	WG734307
Methyl methacrylate	ppb	3.84	3.94	102.	70-130	2.73	25	WG734307
MTBE	ppb	4.25	4.10	113.	70-130	3.51	25	WG734307
Methylene Chloride	ppb	4.01	4.01	107.	70-130	0.150	25	WG734307
n-Hexane	ppb	4.36	4.35	116.	70-130	0.170	25	WG734307
Naphthalene	ppb	4.02	3.86	107.	53.4-158	4.10	25	WG734307
o-Xylene	ppb	4.16	4.11	111.	70-130	1.19	25	WG734307
Propene	ppb	4.36	4.27	116.	70-130	2.06	25	WG734307
Styrene	ppb	4.40	4.29	117.	70-130	2.50	25	WG734307
Tetrachloroethylene	ppb	4.05	3.81	108.	70-130	6.03	25	WG734307
Tetrahydrofuran	ppb	4.41	4.41	118.	70-130	0.130	25	WG734307
Toluene	ppb	4.13	3.98	110.	70-130	3.60	25	WG734307
trans-1,2-Dichloroethene	ppb	4.20	4.05	112.	70-130	3.48	25	WG734307
trans-1,3-Dichloropropene	ppb	4.19	4.09	112.	70-130	2.56	25	WG734307

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Geosyntec- Seattle, WA
 Jason Flowers
 1201 3rd Ave, Suite #330
 Seattle, WA 98101

Quality Assurance Report
 Level II

L712227

12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 (615) 758-5858
 1-800-767-5859
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 22, 2014

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Trichloroethylene	ppb	4.15	4.06	111.	70-130	2.27	25	WG734307
Trichlorofluoromethane	ppb	4.14	3.90	110.	70-130	6.00	25	WG734307
Vinyl acetate	ppb	4.54	4.45	121.	70-130	2.07	25	WG734307
Vinyl Bromide	ppb	4.21	4.07	112.	70-130	3.38	25	WG734307
Vinyl chloride	ppb	4.27	4.18	114.	70-130	2.10	25	WG734307
1,4-Bromofluorobenzene				102.0	60-140			WG734307
cis-1,2-Dichloroethene	ppb	4.04	4.10	108.	70-130	1.51	25	WG734478
Tetrachloroethylene	ppb	3.98	3.94	106.	70-130	1.07	25	WG734478
Trichloroethylene	ppb	4.00	4.05	107.	70-130	1.06	25	WG734478
1,4-Bromofluorobenzene				101.0	60-140			WG734478
1,4-Dioxane	ppb	4.37	4.17	116.	70-130	4.71	25	WG734671
1,4-Bromofluorobenzene				101.0	60-140			WG734671
cis-1,2-Dichloroethene	ppb	4.24	4.29	113.	70-130	1.18	25	WG734755
Isopropylbenzene	ppb	4.08	4.23	109.	70-130	3.40	25	WG734755
Methyl methacrylate	ppb	3.77	3.76	101.	70-130	0.350	25	WG734755
Tetrachloroethylene	ppb	3.93	3.99	105.	70-130	1.62	25	WG734755
Trichloroethylene	ppb	4.26	4.28	114.	70-130	0.380	25	WG734755
1,4-Bromofluorobenzene				101.0	60-140			WG734755
Methyl Butyl Ketone	ppb	4.69	4.57	125.	36.5-155	2.59	25	WG734873
1,4-Bromofluorobenzene				101.0	60-140			WG734873
cis-1,2-Dichloroethene	ppb	3.51	3.51	94.0	70-130	0.0700	25	WG735009
Tetrachloroethylene	ppb	3.43	3.35	91.0	70-130	2.24	25	WG735009
Trichloroethylene	ppb	3.35	3.26	89.0	70-130	2.89	25	WG735009
1,4-Bromofluorobenzene				113.0	60-140			WG735009

Batch number /Run number / Sample number cross reference

WG734285: R2969533: L712227-02 03 04
 WG734307: R2970258: L712227-01 05 06
 WG734478: R2970310: L712227-03
 WG734671: R2970421: L712227-02
 WG734755: R2970654: L712227-01 05 06
 WG734873: R2970814: L712227-04
 WG735009: R2970969: L712227-04

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

