

**FORMER BIOVAIL CAROLINA FACILITY
SABANA ABAJO INDUSTRIAL PARK
CAROLINA, PUERTO RICO**

TRIP REPORT

PROJECT NO. 05-0001E

Prepared for:

International Process Plants LLC

17 Marlen Drive

Trenton, NJ 08691

Prepared by:

Radiation Data

403 Skillman Rd

Skillman, NJ 08558

Prepared by: Kyle Baicker-McKee, Radiation Data

403 Skillman Road,

Skillman NJ, 08558

June 5, 2015

Kyle Baicker-McKee, QA Officer for Radiation Data

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Dear Mr. Rosoff:

This letter report provides a documentation of communication testing, indoor air monitoring, and indoor air sampling conducted between April 23, and April 24, 2015, and summarizes the results of the system performance evaluation conducted between April 23, and April 24, 2015 in the Former Biovail Carolina Facility located in the Sabana Abajo Industrial Park, Carolina, Puerto Rico. This letter includes a description of air sampling activities, a summary of the system performance evaluation, a summary of the indoor air monitoring and sampling results, and a description of proposed future performance verification and sampling activities

1.0 INTRODUCTION

In 2014, Radiation Data was retained by International Process Plants (IPP) to conduct additional assessment and remediation activities at the former Biovail Laboratories International SRL (Biovail) facility on behalf of Valeant International Bermuda (Valeant), formerly Valeant International (Barbados) and Biovail Laboratories International SRL. The former Biovail facility is located within the Sabana Abajo Industrial Park (SAIP) in the Sabana Abajo Ward, Carolina, Puerto Rico. From here-on, the former Biovail facility will also be referenced as the subject site, the subject facility or the Site. The site location can be seen in Figure 1. The subject site is now being used by Accuprint as a commercial printing operation.

The U.S. Environmental Protection Agency (EPA) has conducted, overseen, or received various assessment activities within the Industrial Park and based upon the results of these assessment activities, the EPA has identified chlorinated volatile organic compounds (CVOC) in soil and groundwater underlying both the former Gillette and Biovail properties. In particular, Trichloroethene, Tetrachloroethene, CIS-1-2 Dichloroethene and Vinyl Chloride were identified as the contaminants of concern (COC).

Radiation Data installed 3 sub-slab depressurizations systems at the site from February 24, 2015 through February 27, 2015, in accordance with the Remedial Action Workplan for the Installation of a Sub-Slab Depressurization/Ventilation System, which was approved in November 2014. The system layout can be seen in Figure 2.

Radiation Data personnel mobilized to the site on April 23, 2015 to perform 24-hour indoor air sampling, communications testing, and indoor air monitoring at the Site.

2.0 SUMMARY OF FIELD ACTIVITIES

2.1 INDOOR AIR MONITORING

Upon arrival at the Site, Radiation Data personnel began conducting indoor air monitoring using a PID. There were fluctuations in the VOC levels present inside the building, and in the sub-slab spaces. On the main floor of the print operation, throughout the installation, VOC levels ranged

from approximately 35 ppm up to 85 ppm, with the vast majority of the time spent between 55 and 70 ppm. In the warehouse portion of the site, levels fluctuated between 10 ppm and 30 ppm. In the office portion of the building, levels ranged from as low as 3.0 ppm up to approximately 15 ppm. There were significantly elevated readings recorded directly near several of the larger pieces of printing equipment. With the wand of the PID placed inside of the larger printing equipment, the PID registered readings of as high as 15,000 ppm. The indoor air sampling included TICs (tentatively identified compounds) in an attempt to differentiate these compounds, as it appears the indoor air concentrations of VOCs detected by the PID are primarily driven by the printing processes currently being used at the site as opposed to as a result of vapor intrusion. The indoor and ambient air sampling results also indicate that the PID readings are a result of the printing processes at the site.

2.2 OUTDOOR AIR MONITORING

Aside from directly next to the diesel generators, which were providing the building power, and directly in front of the sub-slab depressurization system vent stacks after the systems had been turned on, the PID did not register any VOC concentrations in the outdoor work area. Near the exhaust stacks from the sub-slab depressurization systems, the PID registered levels between 35.0 to 115.0 ppm. With the wand of the PID inserted into the vent stack, values ranged from approximately 100 ppm at System 1, to approximately 75 ppm at System 2 and approximately 65 ppm at System 3. The generator exhaust registered over 1200 ppm,, as noted during the installation, and the area directly around the generator registered values between 0.0 and 10.0 ppm.

2.3 SUB-SLAB AIR MONITORING

PID readings were also taken at each suction point for the sub-slab depressurization system, and at each test hole. The deflection of PID readings over background at each test hole was recorded, and is summarized in Table 1. The soil gas at these locations will be monitored again during every round of sampling.

2.3 COMMUNICATION TESTING AND PERFORMANCE VERIFICATION

Cross-slab communication test holes were installed on February 26, 2015 distributed throughout the building space, focused on the northern portion of the slab, as shown on Figure 3. A total of 18 cross-slab communication test ports were installed, with 7 in closest proximity to System 1 where communication was viewed as likely to be the poorest, 6 in closest proximity to System 2, and 5 in closest proximity to System 3, where communication was viewed as likely to be the strongest, based on sub slab data. On April 23 and 24, 2015, Radiation Data collected additional micromanometer data to assess the depressurization of the sub-slab space. The communication holes, which had been filled with a foam backer rod, then had more permanent plastic caps installed. These caps are designed to be removed and replaced to conduct communication sampling throughout the project. Depending on the durability of the caps, more permanent ports may need to be installed at a later date.

System performance was evaluated on April 24, 2015, beginning immediately after the indoor air sampling containers were closed. The following was conducted to verify system performance:

- A system inspection was performed. No problems with the fan, piping, or wall/floor sealing were identified. Additional cracks in the floor slab in the warehouse portion of the building were observed, and sealed.
- The differential pressure at the vent pipe riser for each system is being recorded on an ongoing basis by Accuprint personnel, and the historical data was in line with expectations and normal operating pressures for the systems.
- Differential pressure readings were collected for each of the locations indicated in Figure 4. Tables 2, 3, and 4 show the differential pressure at each communication test port location. Figures 5, 6, and 7 show the relationship between distance from the fan and differential pressure at each communication test port. Figure 8 shows the pressure field extension for each system. Figure 9 shows the difference in communication between February and April 2015.

Based on the communication testing performed following the installation of the sub-slab depressurization systems, and repeated during this sampling event, the entire northern portion of the slab is depressurized, and the vapor intrusion pathway blocked. An additional rounds of communication testing will be performed at the time of future air sampling, and the ports will remain in place so further communication testing can be performed at each air sampling event.

Proving depressurization of the slab may assume added importance if the background contamination in the indoor air interferes with lab analysis for the COCs at the site. While such interference did not occur in this round of air sampling, as printing operations change overtime at the site, background VOC levels inside the Site building may continue to change, and interference with laboratory analysis of air samples may still become a problem.

3.0 SUMMARY OF AIR SAMPLING

Upon arriving at the site, David Rosoff of the EPA, and Kyle Baicker-McKee of Radiation Data walked the site to determine appropriate indoor air sampling locations. Radiation Data personnel conducted performance verification air sampling using EPA Method TO-15 from April 23 to April 24, 2015. On April 23, the SUMMA® canister sampling event was initiated. Seven indoor and one ambient air sampling locations were selected, and the sampling ended 24 hours later on April 24. Eight indoor air samples (7 locations with one duplicate) were collected from the Site building, and one ambient air sample was collected outside the Site building. The indoor air sampling was conducted with one sample location in the warehouse portion of the Site building, three sampling locations in the main print shop area (with the duplicate sample collected at one of these locations), one sampling location in the employee lunch room, and two sampling locations in the management offices of the site. The ambient air sample was collected outside of the main entrance of the Site building. The Air Sampling Locations can be seen on Figure

3.1 AIR SAMPLING ANALYTICAL RESULTS

All the SUMMA® canister samples were analyzed by EMSL Laboratories using the EPA Method TO-15. The Analytical Report is provided in Appendix B. Table 5 presents the analytical results for the COCs at each sampling location. All results are presented in micrograms per cubic meter (pg/m³) and parts per billion by volume (ppbv). Of the COCs at the site, Trichloroethene, Tetrachloroethene, CIS-1-2 Dichloroethene and Vinyl Chloride, none were detected above their reporting limits (RL) in any of the samples collected. Some compounds were detected in elevated concentrations, but none associated with the COCs at the site. Compounds such as acetone, ethanol, isopropyl alcohol and MEK were detected at elevated concentrations in multiple samples, but the detected compounds are consistent with those used in commercial printing operations, and appear unrelated to the mitigation being performed. Similarly, significant quantities of unknown hydrocarbons were detected during the indoor air sampling, but these appear to be related to the printing operations at the Site, and not a result of vapor intrusion.

4.0 SUMMARY AND PROPOSED FUTURE ACTIVITIES

4.1 JULY INDOOR AIR SAMPLING

The system performance evaluation indicates that the SSD system is operating as intended, and the absence of any concentrations of the COCs detected during the indoor air sampling supports this hypothesis. In accordance with the Workplan, Radiation Data will conduct indoor air sampling during July, 2015. The sampling locations and methodology used during the April sampling will be repeated during future sampling events unless future circumstances dictate alterations to the sampling plan.

A potential complicating factor for future air sampling at the site is the presence of VOCs in the indoor air related to the printing business that may provide interference with air sampling for the COCs at the site by raising the detection limit for the COCs. During the April sampling event, the laboratory detection limits for the COCs was not interfered with by the high levels of VOCs present in the print shop, but as printing operations change at the site over time, sampling plans may have to be adjusted if future changes to the printing operations increase the indoor air VOC concentrations.

4.2 COMMUNICATION TESTING AND SYSTEM INSPECTION

Sub-slab communication data will be collected again from each test hole following the indoor air sampling for each sampling event. As the systems run, they open up additional air pathways, and the communication improves over the first month of operation, but the testing will be performed following the collection of the air samples. This data will be used to generate a new map of the site showing the region of influence for the three sub-slab depressurization systems.

Trip Report
Sabana Abajo Industrial Park
Former Biovail Carolina Facility
Carolina, Puerto Rico
Radiation Data Project No. 05-0001D

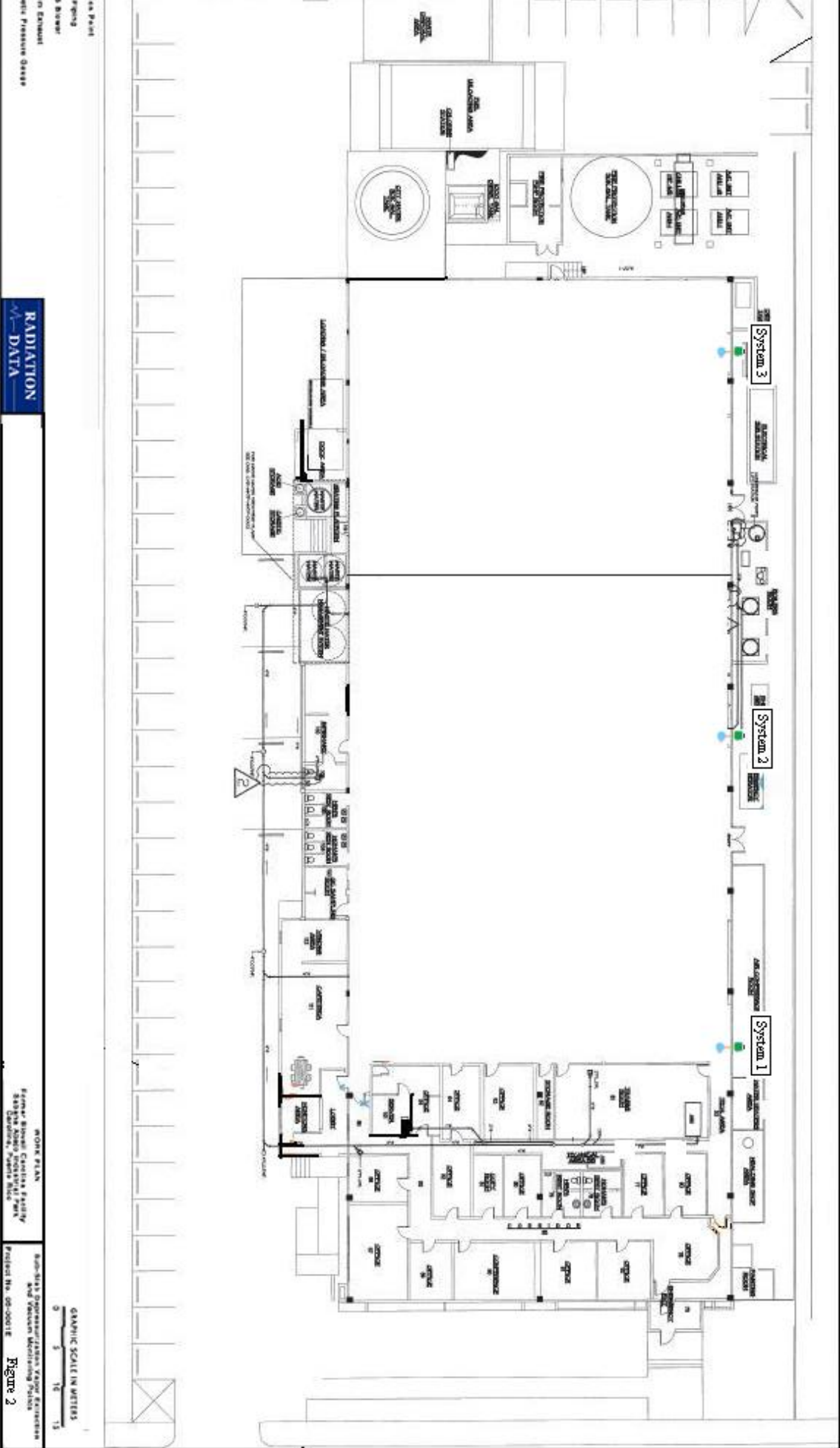
Also, at the next sampling visit, the indoor air will be monitored again with a PID, emissions from the vent stack of all three systems will also be measured with a PID, and PID measurements will be recorded at each communication test hole as well.

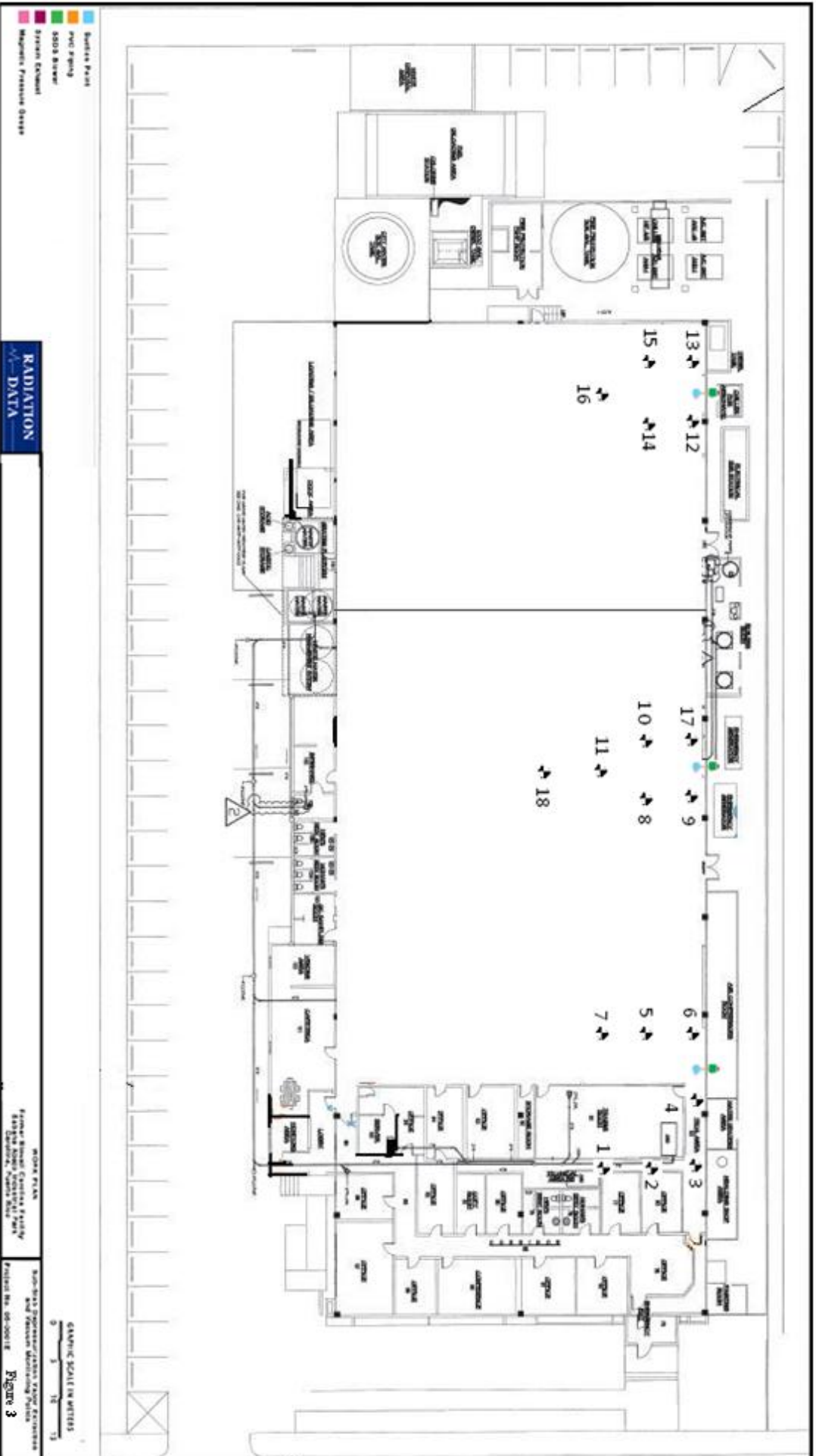
Additionally, each of the three systems will be inspected for damage/wear, and any changes to the manometers will be noted.

If you have any questions regarding this correspondence or the upcoming air sampling, please contact me at (609) 466-4300.

Sincerely,

Kyle Baicker-McKee





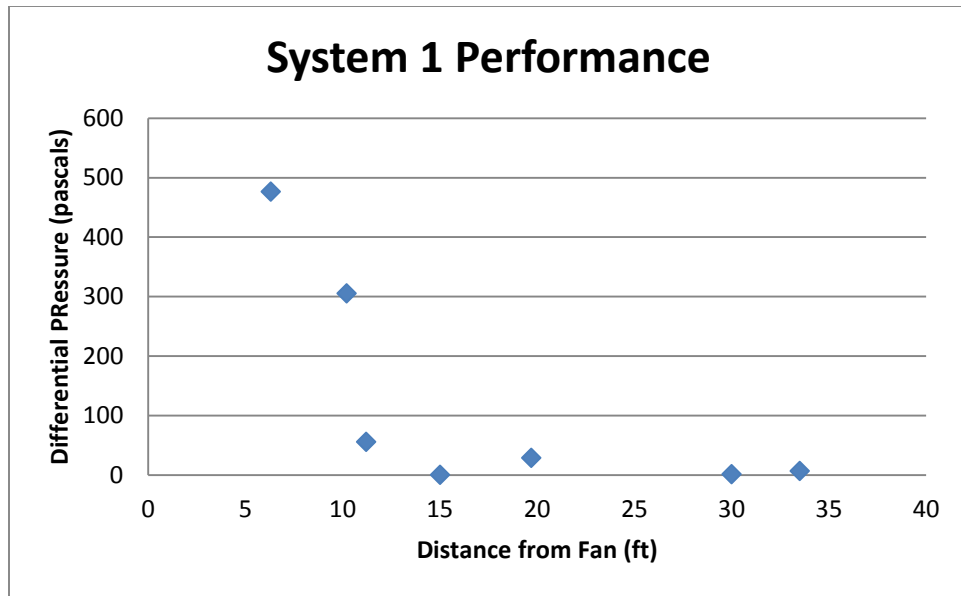


Figure 5

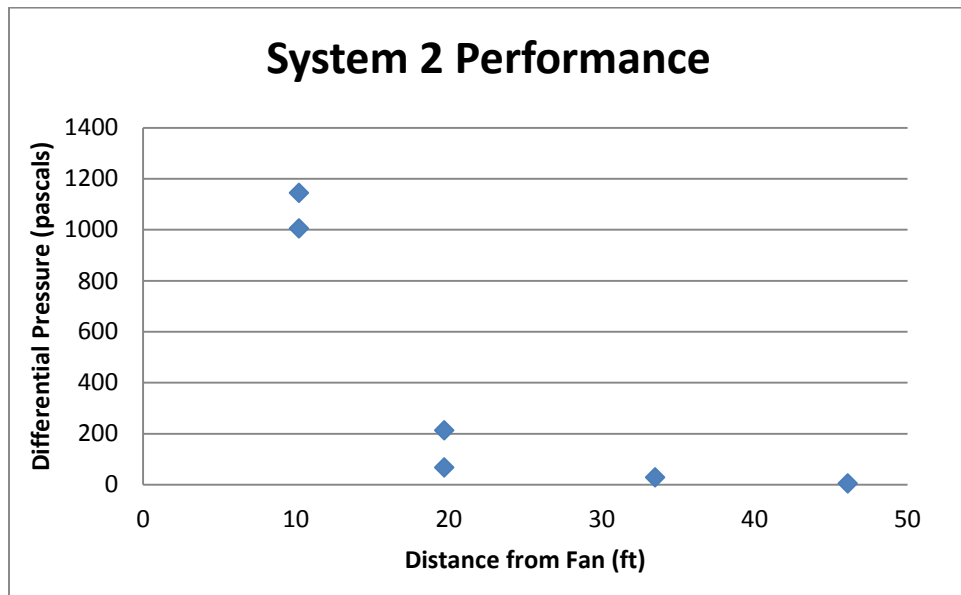
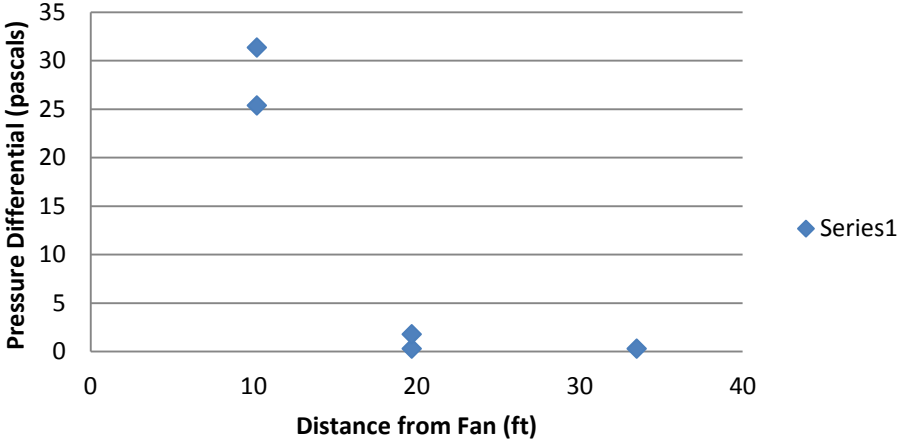
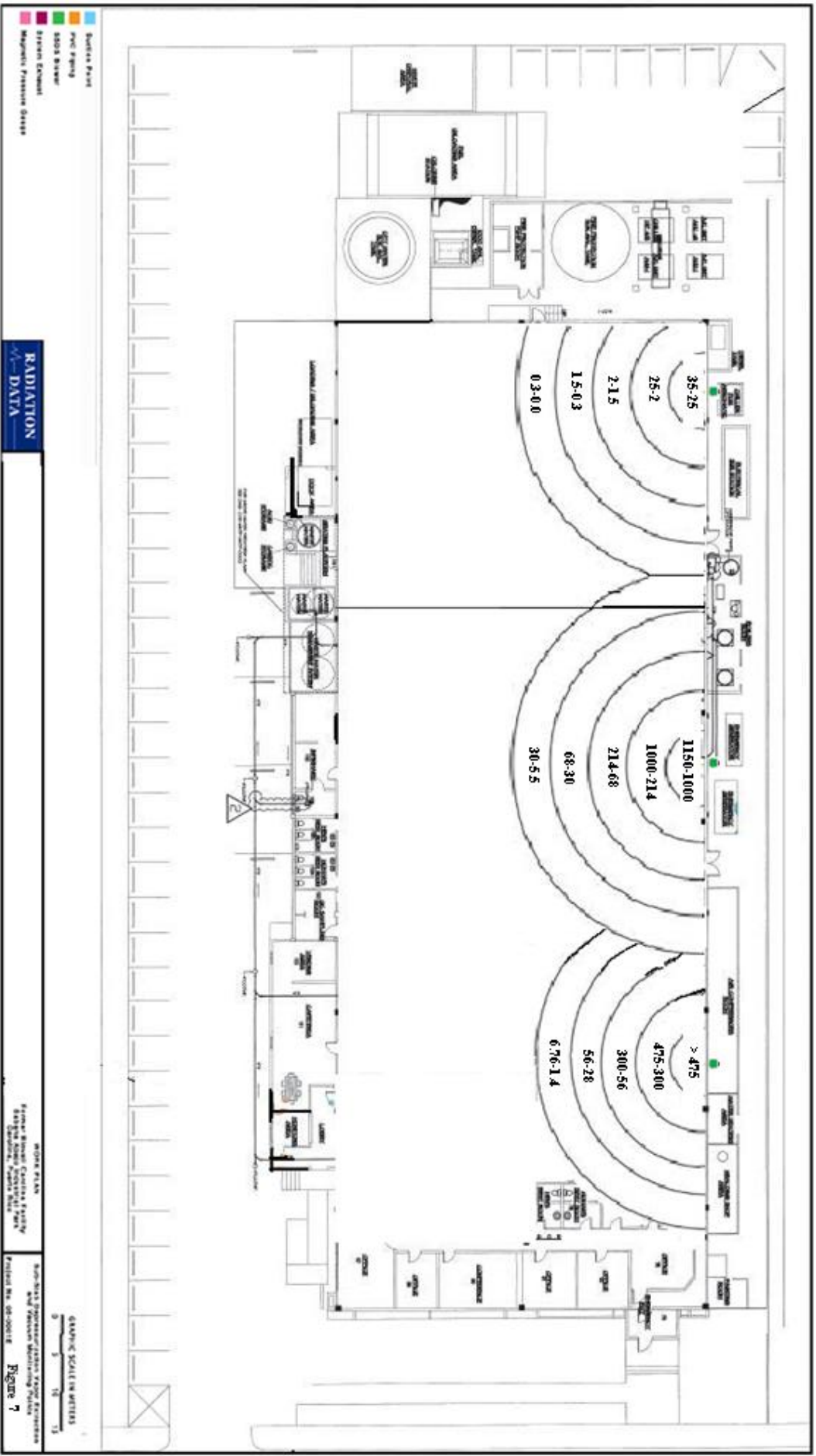


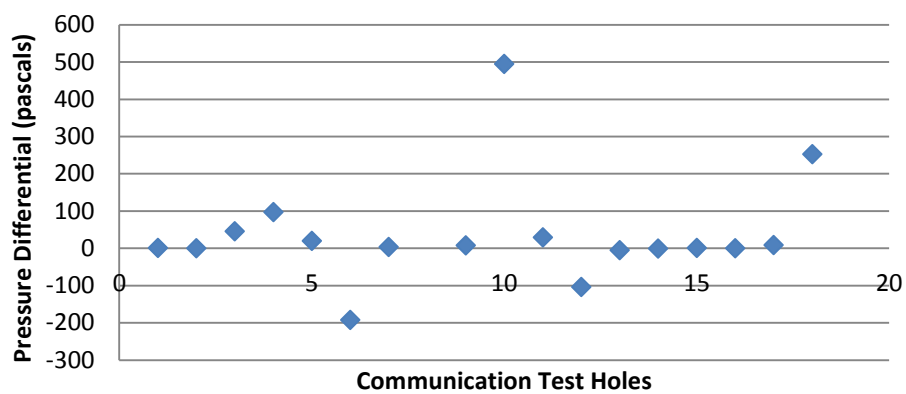
Figure 6

System 3 Performance





Pressure change from February 2015 to April 2015



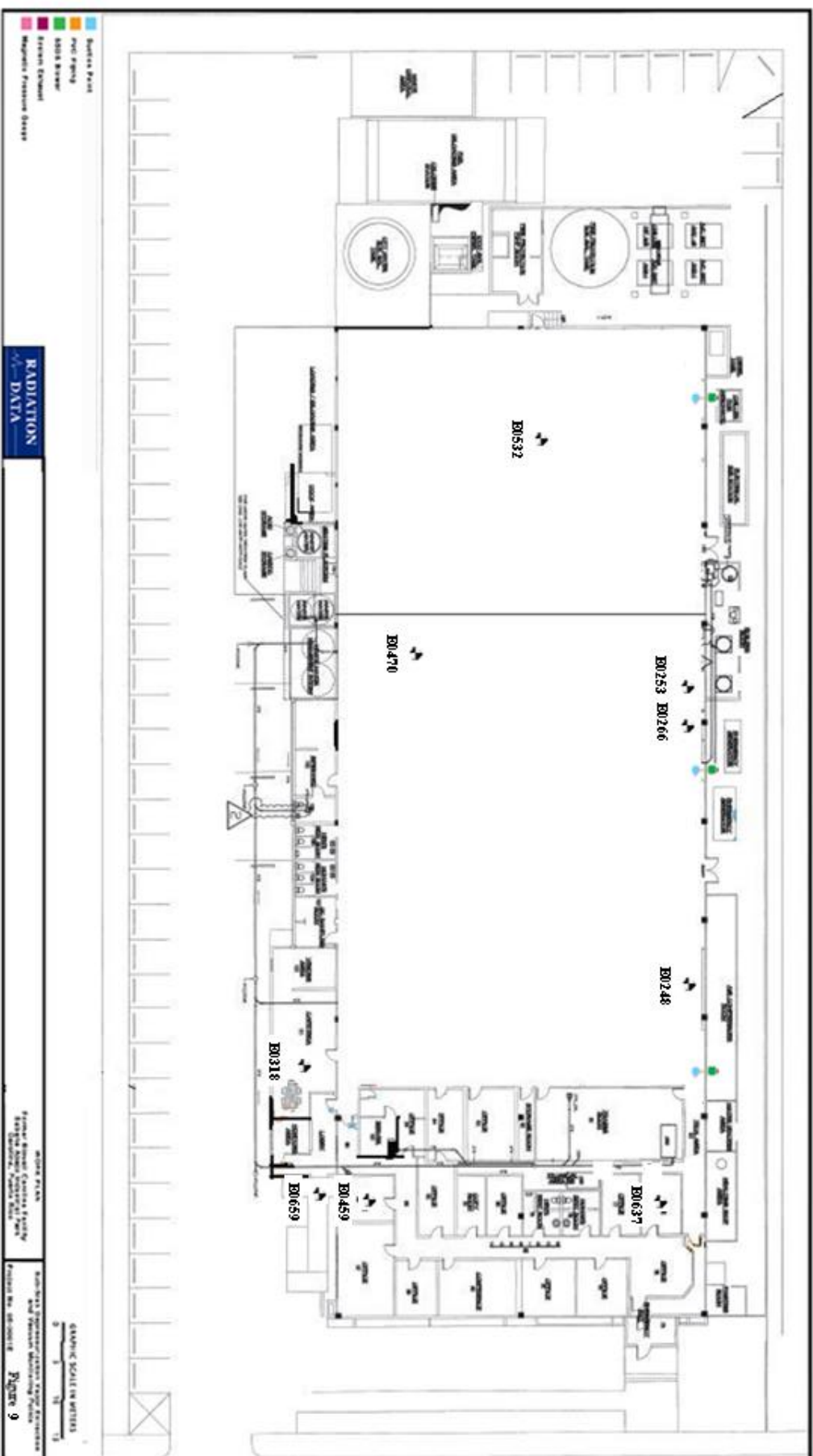


Table 1

Communication Port Number	PID Elevation Over Background on 2-27-15	PID Elevation over Background on 4-24-15
1	0	0
2	0	0
3	2	12
4	2	12
5	0	0
6	0	0
7	0	5
8	5	0
9	10	0
10	0	0
11	3	5
12	8	15
13	1	15
14	10	20
15	10	12
16	0	0
17	0	0
18	6	5.5

Table 2

System 1				
Communication Port Number:	Distance from Fan (ft)	Pressure Differential (Pascals) February 2015	Pressure Differential (Pascals) April 2015	Change in Pressure Differential from February to April (Pascals)
1	30	-0.4	-1.4	1
2	15	-0.1	-0.45	0.35
3	11.2	-9.9	-56	46.1
4	6.3	-379	-476.5	97.5
5	19.7	-8.5	-28.75	20.25
6	10.2	-498	-305.5	-192.5
7	33.5	-2.9	-6.75	3.85

Table 3

System 2				
Communication Port Number:	Distance from Fan (ft)	Pressure Differential (Pascals) February 2015	Pressure Differential (Pascals) April 2015	Change in Pressure Differential from February to April (Pascals)
8	19.7	-60.1	-68.15	8.05
9	10.2	-510	-1005	495
10	19.7	-184.4	-214	29.6
11	33.5	-19.7	-28.45	8.75
17	10.2	-892	-1145	253
18	46.1	-5.2	-5.45	0.25

Table 4

System 3				
Communication Port Number:	Distance from Fan (ft)	Pressure Differential (Pascals) February 2015	Pressure Differential (Pascals) April 2015	Change in Pressure Differential from February to April (Pascals)
12	10.2	-129.1	-25.4	-103.7
13	10.2	-36.4	-31.35	-5.05
14	19.7	-0.8	-0.3	-0.5
15	19.7	-1	-1.8	0.8
16	33.5	-0.2	-0.3	0.1

Table 5

SAMPLE ID	COC			
	Trichloroethene	Tetrachloroethene	CIS-1-2 Dichloroethene	Vinyl Chloride
E0318	ND	ND	ND	ND
E0253	ND	ND	ND	ND
E3265	ND	ND	ND	ND
E0535	ND	ND	ND	ND
E0659	ND	ND	ND	ND
E0470	ND	ND	ND	ND
E0459	ND	ND	ND	ND
E0248	ND	ND	ND	ND
E0637	ND	ND	ND	ND

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.comEMSL Order #: **491500419**Customer ID: **RDTA42**Customer PO: **Not Available**Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558Phone: **609-466-4300**Fax: **Not Available**Project: **Project No. 0S-001E**Date Collected: **04/23/2015**Date Received: **04/28/2015****Laboratory Report- Sample Summary**

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
491500419-0001	Station 4	4/23/2015	11:15 AM
491500419-0002	Station 6	4/23/2015	11:30 AM
491500419-0003	Station 6	4/23/2015	11:30 AM
491500419-0004	Station 8	4/23/2015	11:25 AM
491500419-0005	Station 3	4/23/2015	11:45 AM
491500419-0006	Station 7	4/23/2015	11:20 AM
491500419-0007	Station 2	4/23/2015	11:45 AM
491500419-0008	Station 5	4/23/2015	11:35 AM
491500419-0009	Station 1	4/23/2015	11:40 AM

If "Preliminary Report" is displayed in the signature box; this indicates that there are samples that have not yet been analyzed, that are in a preliminary state, or that analysis is in progress but not completed at the time of report issue.

Report Date:
05/12/2015Report Revision
R0Revision Comments
Initial Report**Marjorie Howley, Laboratory Manager**
or other approved signatory**Test results meet all NELAP requirements unless otherwise specified.**



NJDEP Regulatory Format Summary Data Report

Chain of Custody (external documentation and Field Test Data Sheets)	<u>1</u>
Methodology Review	<u>3</u>
Case Narrative	<u>4</u>
Method Detection Limit Summary	<u>6</u>
Verified Method Detection Limit Summary	<u>NA</u>
Reporting Limit Laboratory Control Sample (RLLCS)	<u>9</u>
Method Blank Summary	<u>15</u>
Instrument Performance Check Summary (BFB)	<u>18</u>
Internal Standard Area and Retention Time Summary	<u>21</u>
Sample Data Summary (lab result forms)	<u>24</u>
Initial Calibration Form Summary	<u>48</u>
Initial Calibration Verification Sample Standard Summary (ICVSS)	<u>51</u>
Continuing Calibration Verification Summary (Opening and Closing)	<u>57</u>
Method Blank Data (lab result form)	<u>69</u>

Please visit our website at <http://www.emsl.com>

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USEPA TO-15

External Chain of Custody/ Field Test Data Sheet

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Ph. (800) 220-3675
Fax (856) 786-0327

EMSL ANALYTICAL, INC.
LABORATORY PRODUCT TRAINING

EMSL Order Number (Lab Use Only):

491500419

Report To Contact Name: <u>Kyle Baker-McKee</u>	Bill To Company: <u>RADIATION DATA</u>	Sampled By (Sign): <u>[Signature]</u>
Company Name: <u>RADIATION DATA</u>	Attention To: <u>Kyle Baker-McKee</u>	Sampled By (Name): <u>Kyle Baker-McKee</u>
Address 1: <u>463 Skillman Rd, Skillman NJ</u>	Address 1: <u>103 Skillman Rd</u>	Total # of Samples:
Address 2: <u>08558</u>	Address 2: <u>Skillman NJ 08558</u>	Date Shipped:
Phone No.: <u>609-373-3437</u>	Phone No.: <u>609-466-4300</u>	Sample Collection Zip Code: <u>08979</u>
Fax:	Fax:	Purchase Order:
Email Results To: <u>Kyle GRADATIONDATA.COM</u>	Project Name: <u>Project No. OS-01E</u>	

EMSL Sample Identifier

Turnaround Time (in Business Days): ☒ 10 Day Standard

☐ 5 Day ☐ 4 Day ☐ 3 Day

☐ 2 Day ☐ 1 Day ☐ Other

Reporting Format: ☐ Results Only (Standard Lab Report)

☒ Full Deliverables (Surcharge may apply)

☐ Other

Field Use - All Information Required!

Lab Use Only

Client Field Sample Identification	Sampling Start Information				Sampling Stop Information				Canister Information						Flow Controller		USEPA TO-15	NDEP LT-10	LIBRARY SEARCH	Indoor/ Ambient	Soil Gas	Landfill/ Vent
	Barometric Pres. ("Hg): 30.0 Z		Interior Temp. (F)		Barometric Pres. ("Hg): 30.00		Interior Temp. (F)		Canister ID	Size (L)	Can Cert Batch ID	Outgoing Pressure ("Hg)	Incoming Pressure ("Hg)	Reg. ID	Cal Flow (ml/min)							
	Start Date	Time (24 hr clock)	Canister Pressure ("Hg)	Interior Temp. (F)	Stop Date	Time (24 hr clock)	Canister Pressure ("Hg)	Interior Temp. (F)														
STATION 14	4-23-15	11:15	29	70°F	4-24-15	11:15	4	70°F	60318	6	63013	29.2	-4.4	7309559	3.6	X			X			
STATION 6		11:30	29.5	65°F		11:25	6	65°F	60253	1			-6.0	7296228	3.4							
STATION 6		11:30	31	65°F		11:25	5.5	65°F	60266	1			-5.2	7289098	3.6							
STATION 8		11:25	32	86°F		11:20	7.5	86°F	60532	1			-5.6	7296097	3.4							
STATION 3		11:45	29	90°F		11:45	8	90°F	60659	1			-9.2	7296053	3.6							
STATION 7		11:20	33	65°F		09:15	0.5	65°F	60470	1			-0.2	7289108	3.5							
STATION 7		11:45	30.5	65°F		11:42	7	70°F	60459	1			-5.8	7342703	3.5							
STATION 5		11:35	32	65°F		11:30	5	65°F	60248	1			-5.2	7281832	3.5							
STATION 1		11:40	29	65°F		11:40	6	65°F	60237	1			-5.4	7239321	3.4							

2015 APR 28
CINNAMINSON, NJ
14:10

Comments:

Lab Canister Certification

Analyst Signature (TO-15):

Relinquished by:	Date/ Time	Received by:	Date/ Time	Affixed Seal #	Reason for Exchange (circle appropriate)
<u>[Signature]</u>	4/20/15 1550	<u>Kyle Baker-McKee</u>	4-22-15 700pm	914, 915, 916	Shipping
<u>[Signature]</u>	4-24-15 1300	<u>VC FX 4-28-15</u>	4/29/15 1645		Shipping
<u>VR</u>	4-28-15 9:40	<u>P. C.</u>			Shipping

491500419

TO-15 Sample Information

Please fill out this worksheet in addition to the Chain of Custody form. This information helps us to best analyze your samples and achieve requested TAT

Company: RADIATION DATA

Contact Person:

Name: KYLE BAILEY-MYKEE

E-mail: KYLE@RADIATIONDATA.COM

Additional E-mails: NICOLETTE@RADIATIONDATA.COM

Telephone #: 609-466-4300 Fax #: 609-466-4302

Do you want your results emailed? ☒ YES ☐ NO

Library Search requested: ☐ YES ☐ NO

A library search will identify up to 20 of the largest, non-target peaks that are not part of the standard TO-15 list of 74 compounds. If you are performing an Indoor Air Quality or odor investigation, the library search is recommended. If you will need help interpreting your report, the library search is REQUIRED.

Sample Type:

☐ Indoor Air Quality (Home/Office)

☐ Vent Gas

☐ Soil Gas

☒ IAQ (Industrial)

☐ Other: _____

Description of sample (Important for the lab to achieve your requested turnaround time):

WOODEN AIR SAMPLES & ONE AMBIENT AIR SAMPLE. AIR IN BUILDING HAS LOTS OF VOCs FROM PAINTING OPERATION, BUT WE ARE CONCERNED WITH VZ FROM AN OLD DAY CLEANING SPILL

Are there any special detection limits, specific set of compounds, or any other specifics you need in your report?

☒ OSHA/NIOSH RELS

☐ Possible Sources of Contaminants

☒ EPA PELS - Circle one:

Residential

Industrial

☐ TVOC (Library Search Required for this format)

☒ NJ DEP - Circle one:

Indoor Air

Soil Gas

☐ Ohio - Circle one: Residential Commercial

☒ NC DNER - Circle one:

Indoor Air

Soil Gas

☐ Indiana Dept Env Mgmt Screening Levels

☒ PA DEP - Circle one:

Indoor Air

Soil Gas

☐ Other (Please list or attach separate sheet)

Do you need any additional analysis on the canister sample? Indicate below (additional charges will apply)

Draeger CMS Analyzer:

☐ CO; ☐ CO₂; ☐ SO₂; ☐ EtO; ☐ NH₃; ☐ Cl₂; ☐ H₂S; ☐ NO₂; ☐ NO_x; ☐ O₂;

☐ Petroleum hydrocarbons; ☐ Phosgene; ☐ Phosphene

US EPA TO-3 (choose one below):

☐ C₁-C₆ hydrocarbons

☐ Methane only

ASTM-D5504 (choose one below):

☐ Sulfur Scan (H₂S, COS, MeSH, EtSH, DMS)

☐ H₂S only

Sample Retention Policy: All canisters are guaranteed to be retained for one day after results are reported. Please review your results promptly to ensure that your project scope is fully addressed. Cans may be retained for a longer period of time but arrangements to hold your cans must be made through your customer account representative quickly. Thank you.

PLEASE CALL KYR BEFORE ANALYSIS

T:\TO15Data\Controlled Documents\Locally Controlled Documents\Controlled Document_TO15_Sample Information_Rev1_121114.xls



EMSL ANALYTICAL, INC.

Methodology Summary NJDEP Form A-4 - USEPA Method TO-15 “*Compendium of Method for the Determination of Toxic Organics Compounds in Ambient Air- Second Edition*”.

Laboratory: EMSL	Project No: Refer to report cover page
Location: 107 Haddon Ave, Westmont, NJ	SDG No: Refer to report cover page

Name	Required Methodology	Indicate Method
Ambient Air Analysis	USEPA Method TO-15	USEPA Method TO-15

All samples in this data package were analyzed in accordance with the USEPA Method TO-15 “*Compendium of Method for the Determination of Toxic Organics Compounds in Ambient Air- Second Edition*”.

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.comEMSL Order #: **491500419**
Customer ID: **RDTA42**
Customer PO: **Not Available**Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558Phone: **609-466-4300**
Fax: **Not Available**Project: **Project No. 0S-001E**Date Collected: **04/23/2015**
Date Received: **04/28/2015**

Case Narrative

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

Restek RTX-502.2, 60m, 0.25mm ID, 1.4um

Concentrator Traps:

Entech Dual Cold Traps: (1) 1/8" No Packing, (2) 1/8" Tenax.

Gas Standards:

Certified Spectra Gas standards were used for all analyses.

Sample Volumes:

Sample volume aliquots for this procedure are 250cc for indoor/ ambient air and 25cc for soil gas. Other volumes for sample dilutions are reflected on each result page.

Holding Times:

Standard holding times of 30 days were met for all samples.

Sampling Pressures:

All samples were received at acceptable pressure/ vacuums unless listed below.

Sample Dilutions:

Dilutions reported are designated by the sample # with a "DL" suffix resulting from initial analysis having compounds exceeding calibration as reported with an "E" qualifier.

Ethanol and Isopropanol are not diluted for and may be reported with an "E" qualifier on the final result.

QA/QC criteria outside method specifications are listed below (if applicable).

Initial Calibration

All Initial Calibration criteria met method specification.

Initial Calibration Verification Standard (ICVS)- Second Source

All ICVS's met method specification with 90% of all compounds within the 70-130% recovery range.

Continuing Calibration Verification Standard (CCVS)

All CCVS's met method specification with all compounds with 30% deviation.

Ending Calibration Verification Standard (ECVS)

All ECVS's met method specification with all compounds with 30% deviation.

Method Blanks (MB)

All Method Blanks met method specification with no compounds reported..

Instrument Blanks (IB):

IB050515K-A thru IB050515K-L and IB050615K-A and IB050615K-B were analyzed with no compounds reported.

Reporting Limit Laboratory Control Samples (RLLCS)

All RLLCS's met method specification with 90% of compounds within the 70-130% recovery range .

Manual Integration : -Listed below if applicable. Before and after documentation is included.

IC041515K-1 (K2966) - 1,4-dioxane, IC041515K-0.5 (K2967) - 1,4-dioxane, acetonitrile

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.comEMSL Order #: **491500419**Customer ID: **RDTA42**Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**Fax: **Not Available**Project: **Project No. 0S-001E**Date Collected: **04/23/2015**Date Received: **04/28/2015**

Case Narrative

The following data qualifiers that may have been reported with the data.**ND-** Non Detect. This notation would be used in the results column in lieu of a "U" qualifier.**U-** Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.**J-** Estimated value reported below adjusted reporting limit for target compounds or estimating a concentration for TICs where a 1:1 response is assumed**B-** Compound found in associated method blank as well as in the sample.**E-** Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.**D-** Compound reported from additional diluted analysis.**N-** indicates presumptive evidence of a compound based on library search match.

EMSL Analytical, Inc. certifies that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer –readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

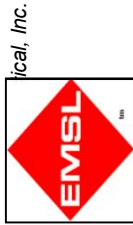
If "Preliminary Report" is displayed in the signature box; this indicates that there are samples that have not yet been analyzed, that are in a preliminary :

Report Date:
05/12/2015

Report Revision
R0

Revision Comments
Initial Report

Marjorie Howley, Laboratory Manager
or other approved signatory



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Annual MDL Study Summary

EMSL Analytical, Inc. - Cinnaminson, NJ Facility

NJDEP Cert. # 03036

Method:	EPA Compendium TO-15
Instrument ID:	K -core
Column ID:	RTX-502.2, 60M x 25um, 1.4um
Analyst:	KW
Matrix:	Air

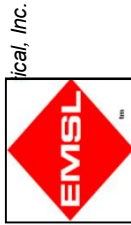
Effective Date:	10/30/2014
Expiration Date:	10/21/2015
QA Officer Name:	William Chamberlain
QA Officer Signature:	<i>William E. Chamberlain</i>

MDL Replicate ID	Data Files										Analysis Date:			
	1	2	3	4	5	6	7	Mean Value	TRUE Value	Mean % Rec.	Std. Dev.	MDL (ppbv)	RL (ppbv)	True/ MDL Ratio
Target Compounds	1	2	3	4	5	6	7	Mean Value	TRUE Value	Mean % Rec.	Std. Dev.	MDL (ppbv)	RL (ppbv)	True/ MDL Ratio
Propylene	0.83	0.70	0.68	0.67	0.83	0.84	0.84	0.77	0.50	154	0.080	0.253	1.0	2.0
Freon 12(Dichlorodifluoromethane)	0.29	0.41	0.35	0.32	0.32	0.30	0.29	0.33	0.50	65	0.044	0.138	0.5	3.6
Freon 114(1,2-Dichlorotetrafluoroethane)	0.43	0.45	0.41	0.41	0.40	0.43	0.38	0.41	0.50	83	0.022	0.069	0.5	7.2
Chloromethane	0.56	0.55	0.50	0.50	0.54	0.55	0.57	0.54	0.50	108	0.029	0.091	0.5	5.5
n-Butane	0.49	0.42	0.42	0.41	0.51	0.48	0.50	0.46	0.50	92	0.042	0.131	0.5	3.8
Vinyl chloride	0.52	0.44	0.42	0.44	0.51	0.54	0.54	0.49	0.50	97	0.051	0.161	0.5	3.1
1,3-Butadiene	0.50	0.49	0.48	0.46	0.47	0.49	0.49	0.48	0.50	96	0.014	0.045	0.5	11.1
Bromomethane	0.57	0.50	0.48	0.44	0.58	0.59	0.58	0.53	0.50	107	0.060	0.188	0.5	2.7
Chloroethane	0.56	0.48	0.44	0.44	0.53	0.55	0.55	0.51	0.50	101	0.052	0.164	0.5	3.0
Ethanol	0.79	0.67	0.52	0.42	0.65	0.69	0.64	0.63	0.50	125	0.119	0.375	0.5	1.3
Bromoethene(Vinyl bromide)	0.56	0.42	0.43	0.42	0.55	0.57	0.55	0.50	0.50	100	0.073	0.229	0.5	2.2
Freon 11(Trichlorofluoromethane)	0.54	0.47	0.46	0.44	0.50	0.53	0.54	0.50	0.50	99	0.040	0.126	0.5	4.0
Isopropyl alcohol(2-Propanol)	0.68	0.57	0.49	0.47	0.62	0.64	0.62	0.59	0.50	117	0.077	0.242	0.5	2.1
Freon 113(1,1,2-Trichlorotrifluoroethane)	0.56	0.49	0.46	0.47	0.55	0.56	0.57	0.52	0.50	105	0.048	0.150	0.5	3.3
Acetone	0.67	0.59	0.52	0.53	0.62	0.65	0.65	0.60	0.50	121	0.059	0.185	0.5	2.7
1,1-Dichloroethene	0.50	0.43	0.41	0.40	0.47	0.49	0.50	0.46	0.50	92	0.042	0.133	0.5	3.8
Acetonitrile	0.54	0.50	0.45	0.48	0.56	0.58	0.60	0.53	0.50	105	0.055	0.171	0.5	2.9
Tertiary butyl alcohol(TBA)	0.47	0.44	0.43	0.44	0.45	0.46	0.46	0.45	0.50	90	0.014	0.044	0.5	11.4
Bromoethane(Ethyl bromide)	0.57	0.43	0.42	0.39	0.56	0.58	0.57	0.50	0.50	101	0.085	0.269	0.5	1.9
3-Chloropropene(Allyl chloride)	0.52	0.46	0.47	0.45	0.55	0.56	0.56	0.51	0.50	102	0.048	0.151	0.5	3.3
Carbon disulfide	0.53	0.45	0.43	0.43	0.52	0.55	0.54	0.49	0.50	98	0.054	0.170	0.5	2.9
Methylene chloride	0.56	0.53	0.52	0.53	0.58	0.59	0.59	0.56	0.50	111	0.031	0.099	0.5	5.1
Acrylonitrile	0.45	0.43	0.39	0.41	0.45	0.49	0.49	0.44	0.50	89	0.036	0.114	0.5	4.4

Annual MDL Study Summary

Effective Date:	10/30/2014
Expiration Date:	10/21/2015
QA Officer Name:	William Chamberlain
QA Officer Signature:	<i>William E. Chamberlain</i>

7 of 80



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Annual MDL Study Summary

EMSL Analytical, Inc. - Cinnaminson, NJ Facility

NJDEP Cert. # 03036

Method:	EPA Compendium TO-15
Instrument ID:	K -core
Column ID:	RTX-502.2, 60M x 25um, 1.4um
Analyst:	KW
Matrix:	Air

Effective Date:	10/30/2014
Expiration Date:	10/21/2015
QA Officer Name:	William Chamberlain
QA Officer Signature:	<i>William E. Chamberlain</i>

MDL Replicate ID	Data Files							Analysis Date:			
	1	2	3	4	5	6	7	Mean Value	TRUE Value	Mean % Rec.	Std. Dev.
Spike Amount											
0.5	K1775	K1689	K1690	K1691	K1772	K1773	K1774	10/30/2014			
Target Compounds	1	2	3	4	5	6	7	Mean Value	TRUE Value	Mean % Rec.	Std. Dev.
Toluene	0.51	0.49	0.48	0.46	0.50	0.49	0.50	0.49	0.50	98	0.017
trans-1,3-Dichloropropene	0.36	0.41	0.40	0.40	0.33	0.34	0.35	0.37	0.50	74	0.034
1,1,2-Trichloroethane	0.49	0.52	0.49	0.52	0.48	0.49	0.49	0.50	0.50	100	0.018
2-Hexanone(MBK)	0.42	0.49	0.49	0.49	0.40	0.40	0.43	0.45	0.50	89	0.043
Tetrachloroethene	0.54	0.52	0.49	0.48	0.52	0.53	0.52	0.51	0.50	102	0.021
Dibromochloromethane	0.44	0.46	0.46	0.45	0.42	0.43	0.44	0.44	0.50	88	0.017
1,2-Dibromoethane	0.44	0.48	0.46	0.46	0.41	0.43	0.42	0.44	0.50	88	0.024
Chlorobenzene	0.54	0.52	0.51	0.51	0.52	0.52	0.57	0.53	0.50	105	0.019
Ethylbenzene	0.58	0.56	0.54	0.53	0.55	0.55	0.61	0.56	0.50	112	0.026
Xylene (p,m)	1.18	1.19	1.12	1.11	1.11	1.11	1.24	1.15	1.00	115	0.053
Xylene (Ortho)	0.62	0.61	0.58	0.59	0.60	0.59	0.66	0.61	0.50	121	0.027
Styrene	0.50	0.52	0.50	0.50	0.48	0.47	0.52	0.50	0.50	100	0.020
Isopropylbenzene (cumene)	0.63	0.61	0.60	0.59	0.61	0.61	0.66	0.62	0.50	123	0.024
Bromoforn	0.42	0.45	0.43	0.44	0.41	0.40	0.44	0.43	0.50	86	0.019
1,1,2,2-Tetrachloroethane	0.53	0.53	0.53	0.54	0.51	0.51	0.56	0.53	0.50	106	0.019
4-Ethyltoluene	0.64	0.63	0.62	0.63	0.61	0.60	0.66	0.63	0.50	126	0.019
1,3,5-Trimethylbenzene	0.68	0.67	0.67	0.67	0.63	0.64	0.71	0.67	0.50	133	0.026
2-Chlorotoluene	0.62	0.64	0.64	0.64	0.59	0.58	0.64	0.62	0.50	125	0.027
1,2,4-Trimethylbenzene	0.67	0.67	0.65	0.66	0.65	0.65	0.73	0.67	0.50	134	0.027
1,3-Dichlorobenzene	0.50	0.54	0.52	0.53	0.49	0.49	0.53	0.51	0.50	103	0.023
1,4-Dichlorobenzene	0.44	0.48	0.48	0.48	0.44	0.42	0.45	0.46	0.50	91	0.025
Benzyl chloride	0.30	0.36	0.35	0.36	0.30	0.28	0.32	0.32	0.50	65	0.032
1,2-Dichlorobenzene	0.61	0.61	0.62	0.62	0.60	0.59	0.65	0.61	0.50	123	0.018
1,2,4-Trichlorobenzene	0.38	0.45	0.46	0.45	0.40	0.38	0.41	0.42	0.50	84	0.034
Hexachloro-1,3-butadiene	0.75	0.68	0.68	0.69	0.73	0.72	0.79	0.72	0.50	144	0.040
Naphthalene	0.29	0.37	0.37	0.37	0.30	0.29	0.31	0.33	0.50	65	0.038

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800/ (856)858-4571

<http://www.EMSL.com> TO-15_Lab@emsl.comEMSL Order: RLLCS
EMSL Sample ID: RLLCS050515K-0.5

Report Date: 05/27/2015

Project ID: Reporting Limit Laboratory Control Sample

Sampling Date: NA

Canister ID: E0554

Lab Sample ID: RLLCS050515K-0.5

Lab File ID: K3302.D

Sample Vol(ml): 62.5

Dilution Factor: 1

Analysis Date: 05/05/2015

Instrument ID: 5973K

Analyst Initials: KW

Reporting Limit Laboratory Control Sample

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)
Propylene	115-07-1	42.08	0.5	0.43	86		60-140
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.5	0.41	82		60-140
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	0.5	0.53	106		60-140
Chloromethane	74-87-3	50.49	0.5	0.53	106		60-140
n-Butane	106-97-8	58.12	0.5	0.48	96		60-140
Vinyl chloride	75-01-4	62.50	0.5	0.49	98		60-140
1,3-Butadiene	106-99-0	54.09	0.5	0.45	90		60-140
Bromomethane	74-83-9	94.94	0.5	0.55	110		60-140
Chloroethane	75-00-3	64.52	0.5	0.52	104		60-140
Ethanol	64-17-5	46.07	0.5	0.55	110		60-140
Bromoethene(Vinyl bromide)	593-60-2	106.9	0.5	0.48	96		60-140
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.5	0.55	110		60-140
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.5	0.47	94		60-140
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	0.5	0.51	102		60-140
Acetone	67-64-1	58.08	0.5	0.54	108		60-140
1,1-Dichloroethene	75-35-4	96.94	0.5	0.47	94		60-140
Acetonitrile	75-05-8	41.00	0.5	0.73	146	*	60-140
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.5	0.42	84		60-140
Bromoethane(Ethyl bromide)	74-96-4	108.0	0.5	0.51	102		60-140
3-Chloropropene(Allyl chloride)	107-05-1	76.53	0.5	0.42	84		60-140
Carbon disulfide	75-15-0	76.14	0.5	0.50	100		60-140
Methylene chloride	75-09-2	84.94	0.5	0.55	110		60-140
Acrylonitrile	107-13-1	53.00	0.5	0.42	84		60-140
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	0.5	0.43	86		60-140
trans-1,2-Dichloroethene	156-60-5	96.94	0.5	0.47	94		60-140
n-Hexane	110-54-3	86.17	0.5	0.42	84		60-140
1,1-Dichloroethane	75-34-3	98.96	0.5	0.48	96		60-140
Vinyl acetate	108-05-4	86.00	0.5	0.35	70		60-140
2-Butanone(MEK)	78-93-3	72.10	0.5	0.42	84		60-140
cis-1,2-Dichloroethene	156-59-2	96.94	0.5	0.44	88		60-140
Ethyl acetate	141-78-6	88.1	0.5	0.43	86		60-140

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800/ (856)858-4571

<http://www.EMSL.com> TO-15 Lab@emsl.comEMSL Order: RLLCS
EMSL Sample ID: RLLCS050515K-0.5

Report Date: 05/27/2015

Project ID: Reporting Limit Laboratory Control Sample

Sampling Date: NA

Canister ID: E0554

Lab Sample ID: RLLCS050515K-0.5

Lab File ID: K3302.D

Sample Vol(ml): 62.5

Dilution Factor: 1

Analysis Date: 05/05/2015

Instrument ID: 5973K

Analyst Initials: KW

Reporting Limit Laboratory Control Sample

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)
Chloroform	67-66-3	119.4	0.5	0.52	104		60-140
Tetrahydrofuran	109-99-9	72.11	0.5	0.42	84		60-140
1,1,1-Trichloroethane	71-55-6	133.4	0.5	0.50	100		60-140
Cyclohexane	110-82-7	84.16	0.5	0.45	90		60-140
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	0.5	0.43	86		60-140
Carbon tetrachloride	56-23-5	153.8	0.5	0.50	100		60-140
n-Heptane	142-82-5	100.2	0.5	0.41	82		60-140
1,2-Dichloroethane	107-06-2	98.96	0.5	0.52	104		60-140
Benzene	71-43-2	78.11	0.5	0.49	98		60-140
Trichloroethene	79-01-6	131.4	0.5	0.48	96		60-140
1,2-Dichloropropane	78-87-5	113.0	0.5	0.45	90		60-140
Methyl Methacrylate	80-62-6	100.12	0.5	0.38	76		60-140
Bromodichloromethane	75-27-4	163.8	0.5	0.51	102		60-140
1,4-Dioxane	123-91-1	88.12	0.5	0.42	84		60-140
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	0.5	0.42	84		60-140
cis-1,3-Dichloropropene	10061-01-5	111.0	0.5	0.45	90		60-140
Toluene	108-88-3	92.14	0.5	0.44	88		60-140
trans-1,3-Dichloropropene	10061-02-6	111.0	0.5	0.44	88		60-140
1,1,2-Trichloroethane	79-00-5	133.4	0.5	0.49	98		60-140
2-Hexanone(MBK)	591-78-6	100.1	0.5	0.42	84		60-140
Tetrachloroethene	127-18-4	165.8	0.5	0.47	94		60-140
Dibromochloromethane	124-48-1	208.3	0.5	0.46	92		60-140
1,2-Dibromoethane	106-93-4	187.8	0.5	0.47	94		60-140
Chlorobenzene	108-90-7	112.6	0.5	0.50	100		60-140
Ethylbenzene	100-41-4	106.2	0.5	0.48	96		60-140
Xylene (p,m)	1330-20-7	106.2	1.0	0.96	96		60-140
Xylene (Ortho)	95-47-6	106.2	0.5	0.45	90		60-140
Styrene	100-42-5	104.1	0.5	0.43	86		60-140
Isopropylbenzene (cumene)	98-82-8	120.19	0.5	0.46	92		60-140
Bromoform	75-25-2	252.8	0.5	0.44	88		60-140
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.5	0.50	100		60-140

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Phone/Fax: (856)858-4800/ (856)858-4571

<http://www.EMSL.com> TO-15 Lab@emsl.comEMSL Order: RLLCS
EMSL Sample ID: RLLCS050515K-0.5

Report Date: 05/27/2015

Project ID: Reporting Limit Laboratory Control Sample

Sampling Date: NA

Canister ID: E0554

Lab Sample ID: RLLCS050515K-0.5

Lab File ID: K3302.D

Sample Vol(ml): 62.5

Dilution Factor: 1

Analysis Date: 05/05/2015

Instrument ID: 5973K

Analyst Initials: KW

Reporting Limit Laboratory Control Sample

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)
4-Ethyltoluene	622-96-8	120.2	0.5	0.47	94		60-140
1,3,5-Trimethylbenzene	108-67-8	120.2	0.5	0.49	98		60-140
2-Chlorotoluene	95-49-8	126.6	0.5	0.49	98		60-140
1,2,4-Trimethylbenzene	95-63-6	120.2	0.5	0.45	90		60-140
1,3-Dichlorobenzene	541-73-1	147.0	0.5	0.50	100		60-140
1,4-Dichlorobenzene	106-46-7	147.0	0.5	0.51	102		60-140
Benzyl chloride	100-44-7	126.0	0.5	0.42	84		60-140
1,2-Dichlorobenzene	95-50-1	147.0	0.5	0.52	104		60-140
1,2,4-Trichlorobenzene	120-82-1	181.5	0.5	0.52	104		60-140
Hexachloro-1,3-butadiene	87-68-3	260.8	0.5	0.53	106		60-140
Naphthalene	91-20-3	128.17	0.5	0.52	104		60-140

Surrogate

4-Bromofluorobenzene

Result

9.8

Spike

10

Recovery

98%

= Compounds outside control limits marked with asterisk (*).

Total Compounds Spiked 73

Total Outside Control Limits 1

% Recoveries within Control Limits 99

Acceptable Criteria: 90% of compounds must be within control limits

NJDEP Certification #: 03036

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**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800/ (856)858-4571

<http://www.EMSL.com> TO-15_Lab@emsl.comEMSL Order: RLLCS
EMSL Sample ID: RLLCS050615K-0.5

Report Date: 05/28/2015

Project ID: Reporting Limit Laboratory Control Sample

Sampling Date: NA

Canister ID: E0554

Lab Sample ID: RLLCS050615K-0.5

Lab File ID: K3330.D

Sample Vol(ml): 62.5

Dilution Factor: 1

Analysis Date: 05/06/2015

Instrument ID: 5973K

Analyst Initials: KW

Reporting Limit Laboratory Control Sample

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)
Propylene	115-07-1	42.08	0.5	0.45	90		60-140
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.5	0.52	104		60-140
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	0.5	0.53	106		60-140
Chloromethane	74-87-3	50.49	0.5	0.47	94		60-140
n-Butane	106-97-8	58.12	0.5	0.45	90		60-140
Vinyl chloride	75-01-4	62.50	0.5	0.46	92		60-140
1,3-Butadiene	106-99-0	54.09	0.5	0.52	104		60-140
Bromomethane	74-83-9	94.94	0.5	0.51	102		60-140
Chloroethane	75-00-3	64.52	0.5	0.52	104		60-140
Ethanol	64-17-5	46.07	0.5	1.2	240	*	60-140
Bromoethene(Vinyl bromide)	593-60-2	106.9	0.5	0.47	94		60-140
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.5	0.59	118		60-140
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.5	0.56	112		60-140
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	0.5	0.52	104		60-140
Acetone	67-64-1	58.08	0.5	0.70	140		60-140
1,1-Dichloroethene	75-35-4	96.94	0.5	0.48	96		60-140
Acetonitrile	75-05-8	41.00	0.5	0.71	142	*	60-140
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.5	0.43	86		60-140
Bromoethane(Ethyl bromide)	74-96-4	108.0	0.5	0.49	98		60-140
3-Chloropropene(Allyl chloride)	107-05-1	76.53	0.5	0.41	82		60-140
Carbon disulfide	75-15-0	76.14	0.5	0.49	98		60-140
Methylene chloride	75-09-2	84.94	0.5	0.57	114		60-140
Acrylonitrile	107-13-1	53.00	0.5	0.40	80		60-140
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	0.5	0.44	88		60-140
trans-1,2-Dichloroethene	156-60-5	96.94	0.5	0.49	98		60-140
n-Hexane	110-54-3	86.17	0.5	0.39	78		60-140
1,1-Dichloroethane	75-34-3	98.96	0.5	0.49	98		60-140
Vinyl acetate	108-05-4	86.00	0.5	0.35	70		60-140
2-Butanone(MEK)	78-93-3	72.10	0.5	0.43	86		60-140
cis-1,2-Dichloroethene	156-59-2	96.94	0.5	0.45	90		60-140
Ethyl acetate	141-78-6	88.1	0.5	0.46	92		60-140

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<http://www.EMSL.com> TO-15 Lab@emsl.comEMSL Order: RLLCS
EMSL Sample ID: RLLCS050615K-0.5

Report Date: 05/28/2015

Project ID: Reporting Limit Laboratory Control Sample

Sampling Date: NA

Canister ID: E0554

Lab Sample ID: RLLCS050615K-0.5

Lab File ID: K3330.D

Sample Vol(ml): 62.5

Dilution Factor: 1

Analysis Date: 05/06/2015

Instrument ID: 5973K

Analyst Initials: KW

Reporting Limit Laboratory Control Sample

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)
Chloroform	67-66-3	119.4	0.5	0.54	108		60-140
Tetrahydrofuran	109-99-9	72.11	0.5	0.41	82		60-140
1,1,1-Trichloroethane	71-55-6	133.4	0.5	0.54	108		60-140
Cyclohexane	110-82-7	84.16	0.5	0.41	82		60-140
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	0.5	0.41	82		60-140
Carbon tetrachloride	56-23-5	153.8	0.5	0.54	108		60-140
n-Heptane	142-82-5	100.2	0.5	0.41	82		60-140
1,2-Dichloroethane	107-06-2	98.96	0.5	0.56	112		60-140
Benzene	71-43-2	78.11	0.5	0.47	94		60-140
Trichloroethene	79-01-6	131.4	0.5	0.48	96		60-140
1,2-Dichloropropane	78-87-5	113.0	0.5	0.47	94		60-140
Methyl Methacrylate	80-62-6	100.12	0.5	0.38	76		60-140
Bromodichloromethane	75-27-4	163.8	0.5	0.52	104		60-140
1,4-Dioxane	123-91-1	88.12	0.5	0.35	70		60-140
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	0.5	0.42	84		60-140
cis-1,3-Dichloropropene	10061-01-5	111.0	0.5	0.43	86		60-140
Toluene	108-88-3	92.14	0.5	0.43	86		60-140
trans-1,3-Dichloropropene	10061-02-6	111.0	0.5	0.45	90		60-140
1,1,2-Trichloroethane	79-00-5	133.4	0.5	0.52	104		60-140
2-Hexanone(MBK)	591-78-6	100.1	0.5	0.43	86		60-140
Tetrachloroethene	127-18-4	165.8	0.5	0.46	92		60-140
Dibromochloromethane	124-48-1	208.3	0.5	0.47	94		60-140
1,2-Dibromoethane	106-93-4	187.8	0.5	0.49	98		60-140
Chlorobenzene	108-90-7	112.6	0.5	0.50	100		60-140
Ethylbenzene	100-41-4	106.2	0.5	0.48	96		60-140
Xylene (p,m)	1330-20-7	106.2	1.0	0.98	98		60-140
Xylene (Ortho)	95-47-6	106.2	0.5	0.45	90		60-140
Styrene	100-42-5	104.1	0.5	0.43	86		60-140
Isopropylbenzene (cumene)	98-82-8	120.19	0.5	0.45	90		60-140
Bromoform	75-25-2	252.8	0.5	0.46	92		60-140
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.5	0.48	96		60-140

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EMSL Sample ID: RLLCS050615K-0.5

Report Date: 05/28/2015

Project ID: Reporting Limit Laboratory Control Sample

Sampling Date: NA

Canister ID: E0554

Lab Sample ID: RLLCS050615K-0.5

Lab File ID: K3330.D

Sample Vol(ml): 62.5

Dilution Factor: 1

Analysis Date: 05/06/2015

Instrument ID: 5973K

Analyst Initials: KW

Reporting Limit Laboratory Control Sample

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)
4-Ethyltoluene	622-96-8	120.2	0.5	0.45	90		60-140
1,3,5-Trimethylbenzene	108-67-8	120.2	0.5	0.48	96		60-140
2-Chlorotoluene	95-49-8	126.6	0.5	0.51	102		60-140
1,2,4-Trimethylbenzene	95-63-6	120.2	0.5	0.45	90		60-140
1,3-Dichlorobenzene	541-73-1	147.0	0.5	0.50	100		60-140
1,4-Dichlorobenzene	106-46-7	147.0	0.5	0.49	98		60-140
Benzyl chloride	100-44-7	126.0	0.5	0.43	86		60-140
1,2-Dichlorobenzene	95-50-1	147.0	0.5	0.49	98		60-140
1,2,4-Trichlorobenzene	120-82-1	181.5	0.5	0.49	98		60-140
Hexachloro-1,3-butadiene	87-68-3	260.8	0.5	0.52	104		60-140
Naphthalene	91-20-3	128.17	0.5	0.47	94		60-140

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

= Compounds outside control limits marked with asterisk (*).

Total Compounds Spiked 73

Total Outside Control Limits 2

% Recoveries within Control Limits 97

Acceptable Criteria: 90% of compounds must be within control limits

NJDEP Certification #: 03036

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EPA TO-15

Method Blank Summary

Instrument ID:	041415\	Analysis Date:	04/15/15
Method Blank ID:	MB041415K	Analysis Time:	4:38
Lab File ID:	K2971.D		

This Method Blank applies to the following samples, dilutions, and QC:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
491500318-1	K2972.D	04/15/15	05:27
491500362-1	K2973.D	04/15/15	06:16
491500362-2	K2974.D	04/15/15	07:05
491500362-3	K2975.D	04/15/15	07:54
RLLCS041415K-0.5	K2976.D	04/15/15	08:43
IB041415K-B	K2977.D	04/15/15	09:33
491500362-2	K2978.D	04/15/15	10:23
C3075	K2979.D	04/15/15	11:18
491500353-1	K2980.D	04/15/15	12:07
491500353-2	K2981.D	04/15/15	12:57
491500353-3	K2982.D	04/15/15	13:46
491500353-3DUP	K2983.D	04/15/15	14:36
491500361-1	K2984.D	04/15/15	15:25
RLLCS041415K-0.5	K2985.D	04/15/15	16:14
ECVS041415K-10	K2986.D	04/15/15	17:03



EPA TO-15

Method Blank Summary

Instrument ID:	050515\	Analysis Date:	05/05/15
Method Blank ID:	MB050515K	Analysis Time:	12:15
Lab File ID:	K3301.D		

This Method Blank applies to the following samples, dilutions, and QC:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
RLLCS050515K-0.5	K3302.D	05/05/15	13:06
491500419-1	K3303.D	05/05/15	13:57
491500419-2	K3304.D	05/05/15	14:48
IB050515K-A	K3305.D	05/05/15	15:39
IB050515K-B	K3306.D	05/05/15	16:29
IB050515K-C	K3307.D	05/05/15	17:20
491500419-3	K3308.D	05/05/15	18:11
491500419-4	K3309.D	05/05/15	19:02
IB050515K-D	K3310.D	05/05/15	19:53
IB050515K-E	K3311.D	05/05/15	20:44
IB050515K-F	K3312.D	05/05/15	21:35
491500419-5	K3313.D	05/05/15	22:26
491500419-6	K3314.D	05/05/15	23:18
491500419-7	K3315.D	05/06/15	00:09
IB050515K-G	K3316.D	05/06/15	01:01
IB050515K-H	K3317.D	05/06/15	01:54
IB050515K-I	K3318.D	05/06/15	02:47
491500419-8	K3319.D	05/06/15	03:39
491500419-9	K3320.D	05/06/15	04:31
IB050515K-J	K3321.D	05/06/15	05:26
IB050515K-K	K3322.D	05/06/15	06:22
IB050515K-L	K3323.D	05/06/15	07:19
ECVS050515K-10	K3324.D	05/06/15	08:17
ECVS050515K-10B	K3325.D	05/06/15	10:12



EPA TO-15

Method Blank Summary

Instrument ID:	050615\	Analysis Date:	05/06/15
Method Blank ID:	MB050615K	Analysis Time:	12:42
Lab File ID:	K3328.D		

This Method Blank applies to the following samples, dilutions, and QC:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
RLLCS050615K-0.5	K3329.D	05/06/15	13:32
RLLCS050615K-0.5B	K3330.D	05/06/15	14:23
491500419-6DL	K3331.D	05/06/15	15:13
IB050615K-A	K3332.D	05/06/15	16:03
IB050615K-B	K3333.D	05/06/15	16:54
491500451-1	K3334.D	05/06/15	17:44
491500451-1DUP	K3335.D	05/06/15	18:34
IB050615K-C	K3336.D	05/06/15	19:24
ROOM	K3337.D	05/06/15	21:05
491500452-1	K3338.D	05/06/15	21:56
ROOM2	K3339.D	05/06/15	23:38
491500432-1	K3340.D	05/07/15	00:31
ROOM3	K3341.D	05/07/15	01:24
ECVS050615K-10	K3342.D	05/07/15	02:14



EPA TO-15

Instrument Performance Check Summary

Bromofluorobenzene (BFB)

Instrument Batch ID:	041415\	Analysis Date:	04/14/2015
BFB Check ID:	BFB041415K	Analysis Time:	17:56
BFB File ID:	K2958.D		

m/e	Ion Abundance Criteria	% Relative Abundance
50	8-0 - 40% of mass 95	22.7
75	30.0 - 66.0% of mass 95	53.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 120.0% of mass 95	81.4
175	4.0 - 9.0% of mass 174	6.1 (7.4) 1
176	93.0 - 101.0% of mass 174	78.1 (96.0) 1
177	5.0 - 9.0% of mass 176	5.2 (6.7) 2

1- Value is % mass of 174

2- Value is % mass of 176

This Performance Check applies to the following samples, standards, blanks, and QC.

Laboratory Sample ID	Lab File ID	Date Analyzed	Time Analyzed
IC041415K-40	K2959.D	04/14/2015	18:46
IC041415K-25	K2960.D	04/14/2015	19:35
IC041415K-20	K2961.D	04/14/2015	20:24
IC041415K-15	K2962.D	04/14/2015	21:14
IC041415K-10	K2963.D	04/14/2015	22:03
IC041415K-5	K2964.D	04/14/2015	22:52
IC041415K-2	K2965.D	04/14/2015	23:42
IC041415K-1	K2966.D	04/15/2015	00:31
IC041415K-0.5	K2967.D	04/15/2015	01:21
ICVS041415K-10	K2968.D	04/15/2015	02:10
ICVS041415K-10B	K2969.D	04/15/2015	03:00
IB041415K-A	K2970.D	04/15/2015	03:49
MB041415K	K2971.D	04/15/2015	04:38
491500318-1	K2972.D	04/15/2015	05:27
491500362-1	K2973.D	04/15/2015	06:16
491500362-2	K2974.D	04/15/2015	07:05
491500362-3	K2975.D	04/15/2015	07:54
RLLCS041415K-0.5	K2976.D	04/15/2015	08:43
IB041415K-B	K2977.D	04/15/2015	09:33
491500362-2	K2978.D	04/15/2015	10:23
C3075	K2979.D	04/15/2015	11:18
491500353-1	K2980.D	04/15/2015	12:07
491500353-2	K2981.D	04/15/2015	12:57
491500353-3	K2982.D	04/15/2015	13:46
491500353-3DUP	K2983.D	04/15/2015	14:36
491500361-1	K2984.D	04/15/2015	15:25
RLLCS041415K-0.5	K2985.D	04/15/2015	16:14
ECVS041415K-10	K2986.D	04/15/2015	17:03



EPA TO-15

Instrument Performance Check Summary Bromofluorobenzene (BFB)

Instrument Batch ID:	050515\	Analysis Date:	05/05/2015
BFB Check ID:	BFB050515K	Analysis Time:	10:34
BFB File ID:	K3299.D		

m/e	Ion Abundance Criteria	% Relative Abundance
50	8-0 - 40% of mass 95	21.1
75	30.0 - 66.0% of mass 95	52.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 120.0% of mass 95	84.5
175	4.0 - 9.0% of mass 174	6.1 (7.2) 1
176	93.0 - 101.0% of mass 174	82.1 (97.1) 1
177	5.0 - 9.0% of mass 176	5.4 (6.6) 2

1- Value is % mass of 174

2- Value is % mass of 176

This Performance Check applies to the following samples, standards, blanks, and QC.

Laboratory Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CCVS050515K-10	K3300.D	05/05/2015	11:24
MB050515K	K3301.D	05/05/2015	12:15
RLLCS050515K-0.5	K3302.D	05/05/2015	13:06
491500419-1	K3303.D	05/05/2015	13:57
491500419-2	K3304.D	05/05/2015	14:48
IB050515K-A	K3305.D	05/05/2015	15:39
IB050515K-B	K3306.D	05/05/2015	16:29
IB050515K-C	K3307.D	05/05/2015	17:20
491500419-3	K3308.D	05/05/2015	18:11
491500419-4	K3309.D	05/05/2015	19:02
IB050515K-D	K3310.D	05/05/2015	19:53
IB050515K-E	K3311.D	05/05/2015	20:44
IB050515K-F	K3312.D	05/05/2015	21:35
491500419-5	K3313.D	05/05/2015	22:26
491500419-6	K3314.D	05/05/2015	23:18
491500419-7	K3315.D	05/06/2015	00:09
IB050515K-G	K3316.D	05/06/2015	01:01
IB050515K-H	K3317.D	05/06/2015	01:54
IB050515K-I	K3318.D	05/06/2015	02:47
491500419-8	K3319.D	05/06/2015	03:39
491500419-9	K3320.D	05/06/2015	04:31
IB050515K-J	K3321.D	05/06/2015	05:26
IB050515K-K	K3322.D	05/06/2015	06:22
IB050515K-L	K3323.D	05/06/2015	07:19
ECVS050515K-10	K3324.D	05/06/2015	08:17
ECVS050515K-10B	K3325.D	05/06/2015	10:12

Instrument Batch ID:	050615\		
BFB Check ID:	BFB050615K	Analysis Date:	05/06/2015
BFB File ID:	K3326.D	Analysis Time:	11:02

1- Value is % mass of 174 2- Value is % mass of 176

[illegible]

Analysis Date: 04/14/15
Analysis Time: 10:03 PM



EPA TO-15

Daily Sequence Evaluation

Internal Standard Area and RT Summary

Instrument Batch ID: 050515\
 Lab Standard ID: CCVS050515K-10
 Standard File ID: K3300.D

Analysis Date: 05/05/15
 Analysis Time: 11:24 AM

	Bromochloromethane		1,4-Difluorobenzene		Chlorobenzene-d5	
	Peak Area	#	R.T. (min)	#	Peak Area	#
10 ppbv Std	909412		16.44		2216810	24.33
Upper Limit	1273177		16.77		3103534	24.66
Lower Limit	545647		16.11		1330086	24.00
Lab Sample ID						
MB050515K	981426		16.44		2435120	24.33
RLLCS050515K-0.5	828247		16.44		2087940	24.33
491500419-1	715419		16.44		1820310	24.33
491500419-2	853863		16.44		2208490	24.33
IB050515K-A	875394		16.44		2266570	24.33
IB050515K-B	790972		16.44		2056860	24.33
IB050515K-C	730315		16.44		1919830	24.32
491500419-3	644067		16.44		1655350	24.33
491500419-4	756616		16.44		1918460	24.33
IB050515K-D	911459		16.44		2364900	24.33
IB050515K-E	834368		16.44		2148990	24.33
IB050515K-F	762421		16.44		1992980	24.33
491500419-5	575550		16.44		1508240	24.33
491500419-6	650089		16.44		1718890	24.33
491500419-7	785317		16.44		1988090	24.32
IB050515K-G	919070		16.44		2411870	24.33
IB050515K-H	850621		16.44		2183800	24.33
IB050515K-I	763685		16.44		2004310	24.33
491500419-8	649635		16.44		1701070	24.33
491500419-9	762479		16.44		1948280	24.33
IB050515K-J	876547		16.43		2241980	24.32
IB050515K-K	813285		16.44		2044150	24.33
IB050515K-L	729046		16.44		1892520	24.33
ECVS050515K-10	687000		16.44		1776680	24.33
ECVS050515K-10B	722874		16.43		1846750	24.32

Column used to flag values outside QC Limits with an asterisk (*).

QC Criteria

Peak Area Upper Limit = +40% of daily 10ppbv calibration level internal standard.
 Peak Area Lower Limit = -40% of daily 10ppbv calibration level internal standard.
 RT Upper Limit = +0.33 minutes of daily 10ppbv calibration level internal standard.
 RT Lower Limit = -0.33 minutes of daily 10ppbv calibration level internal standard.

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-1**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 4**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3303.D	E0318	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	110	5.0		210	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	100	5.0		250	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	240	5.0		560	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	5.7	5.0		17	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-1**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 4**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3303.D	E0318	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:**460****ppbv****1000****ug/m3****Surrogate**

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

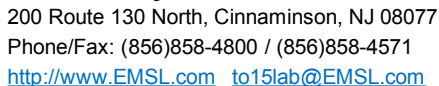
E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**NJDEP Certification #: 03036**



Page 1 of 1

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-2**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 6**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3304.D	E0253	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	92	5.0		170	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	39	5.0		100	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	19	5.0		44	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	6.6	5.0		23	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-2**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 6**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3304.D	E0253	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:**160****ppbv****340****ug/m3****Surrogate**

4-Bromofluorobenzene

Result

9.9

Spike

10

Recovery

99%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-3**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 6**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3308.D	E0266	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	5.5	5.0		13	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	62	5.0		120	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	190	5.0		460	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	380	5.0		900	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-3**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 6**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3308.D	E0266	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:**640****ppbv****1500****ug/m3****Surrogate**

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036



**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-4**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 8**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3309.D	E0535	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	40	5.0		75	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	87	5.0		210	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	190	5.0		450	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

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<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-4**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 8**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3309.D	E0535	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:**320****ppbv****740****ug/m3****Surrogate**

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036



**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-6**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 7**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3314.D	E0470	25 cc	10
Dilution1	05/06/2015	KW	K3331.D	E0470	25 cc	20

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	6.9	5.0		16	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	52	5.0		100	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	190	5.0		470	12	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	700	10	D	1700	24	Reported Dilution #1
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-6**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 7**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/05/2015	KW	K3314.D	E0470	25 cc	10
Dilution1	05/06/2015	KW	K3331.D	E0470	25 cc	20

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	6.0	5.0		23	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			1000	ppbv		2300	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

11

Spike

10

Recovery

110%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

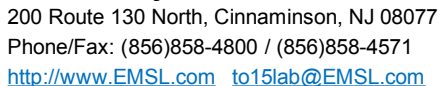
D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036



Page 1 of 1

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-7**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 2**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/06/2015	KW	K3315.D	E0459	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	71	5.0		130	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	72	5.0		180	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	190	5.0		440	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856)858-4800 / (856)858-4571
<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-7**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**

Sample ID: **Station 2**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/06/2015	KW	K3315.D	E0459	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:

330 **ppbv**

750 **ug/m3**

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

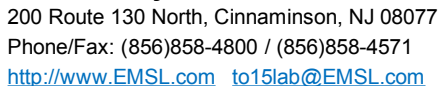
D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036



Sample ID: **Station 2**

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**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-8**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 5**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/06/2015	KW	K3319.D	E0248	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	5.3	5.0		13	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	63	5.0		120	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	200	5.0		500	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	380	5.0		890	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-8**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 5**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/06/2015	KW	K3319.D	E0248	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:**650****ppbv****1500****ug/m3****Surrogate**

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

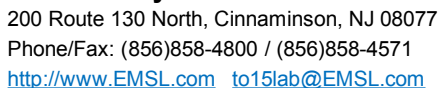
E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**NJDEP Certification #: 03036**



Page 1 of 1

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-9**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 1**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/06/2015	KW	K3320.D	E0637	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	69	5.0		130	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	69	5.0		170	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	170	5.0		410	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491500419**
 EMSL Sample #: **491500419-9**
 Customer ID: **RDTA42**
 Customer PO: **Not Available**

Attn: **Kyle Baicker-McKee**
Radiation Data Inc
403 Skillman Rd,
Skillman, NJ 08558

Phone: **609-466-4300**
 Fax: **Not Available**
 Date Collected: **04/23/2015**
 Date Received: **04/28/2015**

Project: **Project No. 0S-001E**Sample ID: **Station 1**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	05/06/2015	KW	K3320.D	E0637	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	

Total Target Compound Concentrations:**310****ppbv****710****ug/m3****Surrogate**

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

**NJDEP Certification #: 03036**

Method Path : C:\MSDCHEM\1\METHODS\
 Method File : Q041415.M
 Title : TO-15 Determination of VOCs in Air
 Last Update : Wed Apr 15 09:38:52 2015
 Response Via : Initial Calibration

Calibration Files

0.5 =K2967.D 10 =K2963.D 2 =K2965.D 25 =K2960.D
 40 =K2959.D 5 =K2964.D 1 =K2966.D 15 =K2962.D

Compound		0.5	10	2	25	40	5	1	15	Avg	%RSD

1)	Bromochloromethane	-----ISTD-----									
2)	mc Propylene	0.693	0.708	0.666	0.662	0.632	0.763	0.677	0.680	0.685	5.64
3)	mc Freon 12 (Dichloro	2.049	1.776	1.352	1.290	1.145	2.069	1.690	1.560	1.617	21.24
4)	Mc Freon 114 (1,2-Dic	2.372	2.343	2.102	2.136	1.936	2.528	2.270	2.260	2.243	8.16
5)	mc Chloromethane	0.799	0.735	0.717	0.689	0.660	0.798	0.739	0.711	0.731	6.65
6)	mc n-Butane	1.459	1.449	1.405	1.369	1.308	1.561	1.386	1.403	1.417	5.27
7)	Mc Vinyl chloride	0.843	0.853	0.825	0.815	0.793	0.938	0.829	0.832	0.841	5.13
8)	mc 1,3-Butadiene	0.771	0.764	0.713	0.727	0.719	0.830	0.739	0.741	0.751	5.07
9)	Mc Bromomethane	0.744	0.743	0.710	0.716	0.701	0.805	0.740	0.723	0.735	4.38
10)	Mc Chloroethane	0.474	0.469	0.451	0.446	0.433	0.508	0.457	0.458	0.462	4.86
11)	mc Ethanol	0.251	0.197	0.253	0.199	0.181	0.223	0.239	0.203	0.218	12.55
12)	MC Bromoethene (Vinyl	0.746	0.741	0.708	0.718	0.707	0.799	0.719	0.716	0.732	4.23
13)	Mc Freon 11 (Trichlor	2.284	2.189	2.123	2.147	2.198	2.347	2.174	2.131	2.199	3.57
14)	mc Isopropyl alcohol	1.334	1.409	1.489	1.473	1.349	1.550	1.422	1.482	1.439	5.12
15)	mc Freon 113 (1,1,2-T	1.692	1.691	1.602	1.610	1.615	1.819	1.645	1.633	1.663	4.31
16)	mc Acetone	1.556	1.397	1.376	1.398	1.370	1.544	1.408	1.378	1.428	5.34
17)	mc 1,1-Dichloroethen	1.437	1.481	1.390	1.443	1.461	1.597	1.401	1.448	1.457	4.36
18)	MC Acetonitrile	1.114	0.849	0.985	0.810	0.824	0.933	1.008	0.822	0.918	12.05
19)	MC Tertiary butyl al	2.058	2.320	2.199	2.307	2.242	2.473	2.106	2.325	2.254	5.91
20)	mc Bromoethane (Ethyl	0.708	0.713	0.675	0.684	0.687	0.772	0.658	0.694	0.699	4.93
21)	MC 3-Chloropropene (A	1.123	1.250	1.165	1.198	1.186	1.345	1.141	1.215	1.203	5.83
22)	mc Carbon disulfide	2.264	2.249	2.117	2.146	2.165	2.381	2.158	2.167	2.206	3.94
23)	mc Methylene chlorid	1.252	1.047	1.045	0.995	0.996	1.138	1.116	1.016	1.076	8.22
24)	MC Acrylonitrile	0.636	0.690	0.624	0.660	0.652	0.718	0.605	0.667	0.656	5.51
25)	mc Methyl-tert-butyl	2.457	2.598	2.442	2.509	2.537	2.799	2.419	2.548	2.539	4.77
26)	mc trans-1,2-Dichlor	1.306	1.300	1.242	1.253	1.263	1.414	1.267	1.259	1.288	4.32
27)	mc n-Hexane	1.288	1.395	1.301	1.342	1.328	1.498	1.300	1.359	1.351	5.10
28)	mc 1,1-Dichloroethan	1.627	1.680	1.580	1.619	1.639	1.797	1.591	1.641	1.647	4.14
29)	mc Vinyl acetate	1.586	1.903	1.706	1.864	1.873	2.002	1.642	1.857	1.804	7.94
30)	mc 2-Butanone (MEK)	1.840	1.947	1.822	1.879	1.882	2.047	1.808	1.897	1.890	4.09
31)	mc cis-1,2-Dichloroe	0.877	0.922	0.863	0.884	0.905	0.979	0.867	0.898	0.899	4.19
32)	mc Ethyl acetate	2.544	2.627	2.483	2.534	2.549	2.822	2.468	2.555	2.573	4.34
33)	mc Chloroform	1.838	1.868	1.764	1.816	1.879	1.997	1.800	1.829	1.849	3.80
34)	mc Tetrahydrofuran	1.077	1.143	1.072	1.093	1.089	1.222	1.062	1.112	1.109	4.72
35)	mc 1,1,1-Trichloroet	1.912	1.944	1.833	1.916	1.992	2.067	1.880	1.900	1.931	3.72
36)	mc Cyclohexane	1.142	1.250	1.160	1.208	1.230	1.344	1.161	1.220	1.215	5.34
37)	MC 2,2,4-Trimethylpe	4.598	4.892	4.546	4.693	4.745	5.264	4.505	4.760	4.750	5.11
38)	mc Carbon tetrachlor	1.889	1.946	1.785	1.926	2.015	2.085	1.832	1.904	1.923	4.97
39)	mc n-Heptane	1.825	1.899	1.736	1.822	1.837	2.029	1.795	1.846	1.848	4.66
40)	mc 1,2-Dichloroethan	1.435	1.414	1.362	1.383	1.448	1.530	1.393	1.372	1.417	3.85
41)	mc Benzene	2.740	2.806	2.660	2.719	2.777	3.012	2.666	2.742	2.765	4.03
42)	1,4-Difluorobenzene	-----ISTD-----									
43)	mc Trichloroethene	0.399	0.416	0.390	0.412	0.414	0.446	0.392	0.411	0.410	4.28
44)	mc 1,2-Dichloropropa	0.360	0.366	0.339	0.355	0.352	0.396	0.342	0.359	0.359	4.89
45)	mc Methyl Methacryla	0.320	0.365	0.331	0.356	0.355	0.387	0.325	0.358	0.350	6.56
46)	mc Bromodichlorometh	0.692	0.697	0.647	0.695	0.707	0.742	0.658	0.690	0.691	4.20
47)	mc 1,4-Dioxane	0.212	0.184	0.202	0.217	0.208	0.233	0.210	0.220	0.211	6.73
48)	mc 4-Methyl-2-pentan	0.788	0.831	0.769	0.807	0.800	0.887	0.760	0.815	0.807	4.93
49)	mc cis-1,3-Dichlorop	0.526	0.550	0.506	0.544	0.548	0.582	0.501	0.545	0.538	4.85
50)	mc Toluene	1.093	1.144	1.063	1.124	1.130	1.228	1.080	1.126	1.124	4.51
51)	mc trans-1,3-Dichlor	0.539	0.574	0.531	0.573	0.583	0.619	0.525	0.572	0.565	5.53
52)	mc 1,1,2-Trichloroet	0.382	0.381	0.361	0.376	0.381	0.414	0.368	0.376	0.380	4.09

Method Path : C:\MSDCHEM\1\METHODS\
 Method File : Q041415.M
 Title : TO-15 Determination of VOCs in Air
 Last Update : Wed Apr 15 09:38:52 2015
 Response Via : Initial Calibration

Calibration Files

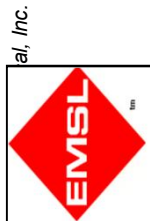
0.5 =K2967.D 10 =K2963.D 2 =K2965.D 25 =K2960.D
 40 =K2959.D 5 =K2964.D 1 =K2966.D 15 =K2962.D

Compound		0.5	10	2	25	40	5	1	15	Avg	%RSD

1)	Bromochloromethane	-----ISTD-----									
53) mc	2-Hexanone (MBK)	0.715	0.770	0.725	0.751	0.751	0.827	0.713	0.757	0.751	4.94
54) mc	Tetrachloroethene	0.528	0.540	0.492	0.534	0.552	0.572	0.499	0.532	0.531	4.91
55) cm	Dibromochlorometh	0.615	0.674	0.603	0.678	0.698	0.710	0.604	0.668	0.656	6.50
56) mc	1,2-Dibromoethane	0.575	0.583	0.546	0.581	0.592	0.628	0.550	0.578	0.579	4.41

57)	Chlorobenzene-d5	-----ISTD-----									
58) mc	Chlorobenzene	1.009	1.003	0.957	0.982	0.983	1.084	0.968	0.989	0.997	3.92
59) mc	Ethylbenzene	1.691	1.713	1.603	1.672	1.655	1.836	1.636	1.691	1.687	4.12
60) mc	Xylene (p,m)	1.339	1.351	1.265	1.311	1.225	1.451	1.278	1.329	1.319	5.18
61) mc	Xylene (Ortho)	1.317	1.376	1.253	1.330	1.330	1.477	1.272	1.346	1.338	5.14
62) mc	Styrene	1.001	1.043	0.970	1.017	1.018	1.123	0.958	1.026	1.019	4.94
63) mc	Isopropylbenzene	1.817	1.886	1.757	1.811	1.782	2.048	1.793	1.843	1.842	4.99
64) mc	Bromoform	0.658	0.716	0.625	0.709	0.724	0.762	0.635	0.704	0.692	6.85
65) mc	1,1,2,2-Tetrachlo	0.985	0.991	0.914	0.921	0.914	1.052	0.942	0.948	0.958	5.02
66) S	4-Bromofluorobenz	0.766	0.725	0.726	0.719	0.723	0.733	0.737	0.721	0.731	2.10
67) cm	4-Ethyltoluene	1.858	2.005	1.840	1.936	1.883	2.187	1.855	1.892	1.932	6.00
68) mc	1,3,5-Trimethylbe	1.565	1.688	1.539	1.486	1.460	1.768	1.530	1.617	1.582	6.60
69) MC	2-Chlorotoluene	1.421	1.375	1.307	1.302	1.281	1.509	1.345	1.324	1.358	5.58
70) mc	1,2,4-Trimethylbe	1.548	1.726	1.566	1.605	1.565	1.815	1.561	1.666	1.631	5.92
71) mc	1,3-Dichlorobenze	1.095	1.140	1.049	1.042	1.031	1.201	1.059	1.078	1.087	5.31
72) mc	1,4-Dichlorobenze	1.086	1.143	1.071	1.037	1.026	1.209	1.070	1.075	1.090	5.47
73) mc	Benzyl chloride	1.327	1.622	1.419	1.531	1.470	1.668	1.386	1.585	1.501	8.03
74) mc	1,2-Dichlorobenze	1.000	1.069	0.989	1.011	0.992	1.117	0.972	1.046	1.025	4.78
75) mc	1,2,4-Trichlorobe	0.873	0.943	0.888	0.987	0.979	0.977	0.868	0.963	0.935	5.39
76) mc	Hexachloro-1,3-bu	0.742	0.788	0.728	0.775	0.756	0.828	0.729	0.790	0.767	4.52
77) mc	Naphthalene	1.989	2.166	2.093	2.203	2.145	2.272	1.997	2.194	2.132	4.69

(#) = Out of Range ### Number of calibration levels exceeded format ###



EPA TO-15 Initial Calibration

Internal Standard Area and Retention Time Evaluation

Instrument ID: 5973K
ICAL ID: Q041415.
Analysis Date 14 Apr 2015

		Bromochloromethane				1,4-Difluorobenzene				Chlorobenzene-d5			
Calibration Level ID	Cal Data File	Peak Area	+/-40% Mean	R.T. (min)	+/-0.33 Mean	Peak Area	+/-40% Mean	R.T. (min)	+/-0.33 Mean	Peak Area	+/-40% Mean	R.T. (min)	+/-0.33 Mean
IC041415K-40	K2959.D	1025300	Pass	16.44	Pass	3106980	Pass	18.58	Pass	2761190	Pass	24.33	Pass
IC041415K-25	K2960.D	1121470	Pass	16.44	Pass	3299330	Pass	18.58	Pass	2904350	Pass	24.33	Pass
IC041415K-15	K2962.D	1168320	Pass	16.44	Pass	3438900	Pass	18.58	Pass	3008790	Pass	24.33	Pass
IC041415K-10	K2963.D	1149290	Pass	16.44	Pass	3417640	Pass	18.57	Pass	2986750	Pass	24.33	Pass
IC041415K-5	K2964.D	1138120	Pass	16.44	Pass	3372620	Pass	18.57	Pass	2975120	Pass	24.33	Pass
IC041415K-2	K2965.D	1107540	Pass	16.44	Pass	3297490	Pass	18.56	Pass	2900300	Pass	24.33	Pass
IC041415K-1	K2966.D	1065050	Pass	16.44	Pass	3160370	Pass	18.57	Pass	2799150	Pass	24.33	Pass
IC041415K-0.5	K2967.D	1042330	Pass	16.44	Pass	3061950	Pass	18.57	Pass	2720340	Pass	24.33	Pass

Mean Values:	1102178	16.44	3269410	18.57	2881999	24.33
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Criteria: Area response of each calibration level must be within +/-40% of the mean area response for each internal standard.
Retention time shift must be within +/-0.33 minutes of the mean retention time for each internal standard.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax:(856)858-4800/ (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: ICVS
 EMSL Sample ID: ICVS041415K-10
 Received Date: NA
 Report Date: 04/15/2015

Project ID: Initial Calibration Verification Standard
 Lab Sample ID: ICVS041415K-10

Sampling Date: NA
 Canister ID: E0536

Lab File ID: K2968.D
 Sample Vol(ml): 62.5
 Dilution Factor: 1

Analysis Date: 04/15/2015
 Instrument ID: 5973K
 Analyst Initials: KW

Initial Calibration Verification Standard

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)	
							Lower	Upper
Propylene	115-07-1	42.08	10	10.4	104%		63%	144%
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	10	10.4	104%		52%	178%
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	10	8.13	81%		55%	122%
Chloromethane	74-87-3	50.49	10	9.83	98%		70%	135%
n-Butane	106-97-8	58.12	10	9.37	94%		67%	131%
Vinyl chloride	75-01-4	62.50	10	9.61	96%		69%	132%
1,3-Butadiene	106-99-0	54.09	10	9.40	94%		69%	130%
Bromomethane	74-83-9	94.94	10	10.1	101%		79%	130%
Chloroethane	75-00-3	64.52	10	9.29	93%		68%	129%
Ethanol	64-17-5	46.07	10	8.98	90%		47%	180%
Bromoethene(Vinyl bromide)	593-60-2	106.9	10	10.2	102%		79%	137%
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	10	9.77	98%		81%	129%
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	10	9.31	93%		58%	154%
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	10	9.84	98%		74%	133%
Acetone	67-64-1	58.08	10	10.0	100%		71%	138%
1,1-Dichloroethene	75-35-4	96.94	10	10.0	100%		76%	135%
Acetonitrile	75-05-8	41.00	10	7.23	72%		33%	128%
Tertiary butyl alcohol(TBA)	75-65-0	74.12	10	8.44	84%		38%	153%
Bromoethane(Ethyl bromide)	74-96-4	108.0	10	9.67	97%		70%	134%
3-Chloropropene(Allyl chloride)	107-05-1	76.53	10	10.4	104%		78%	141%
Carbon disulfide	75-15-0	76.14	10	11.2	112%		83%	153%
Methylene chloride	75-09-2	84.94	10	9.36	94%		72%	128%
Acrylonitrile	107-13-1	53.00	10	10.0	100%		67%	140%
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	10	10.0	100%		74%	139%
trans-1,2-Dichloroethene	156-60-5	96.94	10	10.0	100%		75%	133%
n-Hexane	110-54-3	86.17	10	10.5	105%		75%	144%
1,1-Dichloroethane	75-34-3	98.96	10	9.73	97%		73%	132%
Vinyl acetate	108-05-4	86.00	10	13.2	132%		59%	194%
2-Butanone(MEK)	78-93-3	72.10	10	10.3	103%		74%	144%
cis-1,2-Dichloroethene	156-59-2	96.94	10	9.49	95%		70%	129%
Ethyl acetate	141-78-6	88.1	10	8.73	87%		64%	124%

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax:(856)858-4800/ (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: ICVS
 EMSL Sample ID: ICVS041415K-10
 Received Date: NA
 Report Date: 04/15/2015

Project ID: Initial Calibration Verification Standard
 Lab Sample ID: ICVS041415K-10

Sampling Date: NA
 Canister ID: E0536

Lab File ID: K2968.D
 Sample Vol(ml): 62.5
 Dilution Factor: 1

Analysis Date: 04/15/2015
 Instrument ID: 5973K
 Analyst Initials: KW

Initial Calibration Verification Standard

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)	
							Lower	Upper
Chloroform	67-66-3	119.4	10	9.90	99%		75%	132%
Tetrahydrofuran	109-99-9	72.11	10	9.41	94%		65%	135%
1,1,1-Trichloroethane	71-55-6	133.4	10	9.50	95%		71%	129%
Cyclohexane	110-82-7	84.16	10	9.89	99%		71%	136%
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	10	10.0	100%		70%	137%
Carbon tetrachloride	56-23-5	153.8	10	10.0	100%		75%	134%
n-Heptane	142-82-5	100.2	10	9.71	97%		71%	134%
1,2-Dichloroethane	107-06-2	98.96	10	10.1	101%		75%	135%
Benzene	71-43-2	78.11	10	9.92	99%		69%	136%
Trichloroethene	79-01-6	131.4	10	9.67	97%		73%	132%
1,2-Dichloropropane	78-87-5	113.0	10	9.49	95%		68%	132%
Methyl Methacrylate	80-62-6	100.12	10	10.0	100%		73%	140%
Bromodichloromethane	75-27-4	163.8	10	10.0	100%		76%	137%
1,4-Dioxane	123-91-1	88.12	10	8.66	87%		24%	174%
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	10	10.2	102%		69%	154%
cis-1,3-Dichloropropene	10061-01-5	111.0	10	10.3	103%		77%	141%
Toluene	108-88-3	92.14	10	9.70	97%		72%	135%
trans-1,3-Dichloropropene	10061-02-6	111.0	10	9.46	95%		69%	127%
1,1,2-Trichloroethane	79-00-5	133.4	10	9.61	96%		70%	133%
2-Hexanone(MBK)	591-78-6	100.1	10	10.6	106%		60%	167%
Tetrachloroethene	127-18-4	165.8	10	9.37	94%		70%	131%
Dibromochloromethane	124-48-1	208.3	10	9.69	97%		73%	135%
1,2-Dibromoethane	106-93-4	187.8	10	9.49	95%		70%	129%
Chlorobenzene	108-90-7	112.6	10	9.46	95%		69%	130%
Ethylbenzene	100-41-4	106.2	10	9.68	97%		70%	137%
Xylene (p,m)	1330-20-7	106.2	20	19.3	97%		67%	140%
Xylene (Ortho)	95-47-6	106.2	10	9.49	95%		67%	138%
Styrene	100-42-5	104.1	10	9.41	94%		67%	137%
Isopropylbenzene (cumene)	98-82-8	120.19	10	9.43	94%		64%	143%
Bromoform	75-25-2	252.8	10	9.54	95%		65%	146%
1,1,2,2-Tetrachloroethane	79-34-5	167.9	10	9.16	92%		63%	136%

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856)858-4800/ (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: ICVS
 EMSL Sample ID: ICVS041415K-10
 Received Date: NA
 Report Date: 04/15/2015

Project ID: Initial Calibration Verification Standard
 Lab Sample ID: ICVS041415K-10

Sampling Date: NA
 Canister ID: E0536

Lab File ID: K2968.D
 Sample Vol(ml): 62.5
 Dilution Factor: 1

Analysis Date: 04/15/2015
 Instrument ID: 5973K
 Analyst Initials: KW

Initial Calibration Verification Standard

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)	
							Lower	Upper
4-Ethyltoluene	622-96-8	120.2	10	9.57	96%		76%	144%
1,3,5-Trimethylbenzene	108-67-8	120.2	10	9.57	96%		75%	137%
2-Chlorotoluene	95-49-8	126.6	10	9.48	95%		72%	141%
1,2,4-Trimethylbenzene	95-63-6	120.2	10	9.69	97%		69%	145%
1,3-Dichlorobenzene	541-73-1	147.0	10	9.32	93%		65%	131%
1,4-Dichlorobenzene	106-46-7	147.0	10	9.19	92%		61%	134%
Benzyl chloride	100-44-7	126.0	10	10.3	103%		59%	151%
1,2-Dichlorobenzene	95-50-1	147.0	10	9.26	93%		61%	139%
1,2,4-Trichlorobenzene	120-82-1	181.5	10	7.45	75%		35%	122%
Hexachloro-1,3-butadiene	87-68-3	260.8	10	8.15	82%		39%	143%
Naphthalene	91-20-3	128.17	10	7.81	78%		27%	131%

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

= Compounds outside control limits marked with asterisk (*).

Total Compounds Spiked 73

Total Outside Control Limits 0

% Recoveries within Control Limits **100**



NJDEP Certification #: 03036

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**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax:(856)858-4800/ (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: ICVS
 EMSL Sample ID: ICVS041415K-10B
 Received Date: NA
 Report Date: 04/15/2015

Project ID: Initial Calibration Verification Standard
 Lab Sample ID: ICVS041415K-10B

Sampling Date: NA
 Canister ID: E0536

Lab File ID: K2969.D
 Sample Vol(ml): 62.5
 Dilution Factor: 1

Analysis Date: 04/15/2015
 Instrument ID: 5973K
 Analyst Initials: KW

Initial Calibration Verification Standard

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)	
							Lower	Upper
Propylene	115-07-1	42.08	10	10.8	108%		63%	144%
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	10	10.5	105%		52%	178%
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	10	8.24	82%		55%	122%
Chloromethane	74-87-3	50.49	10	10.1	101%		70%	135%
n-Butane	106-97-8	58.12	10	9.78	98%		67%	131%
Vinyl chloride	75-01-4	62.50	10	9.86	99%		69%	132%
1,3-Butadiene	106-99-0	54.09	10	9.73	97%		69%	130%
Bromomethane	74-83-9	94.94	10	10.3	103%		79%	130%
Chloroethane	75-00-3	64.52	10	9.50	95%		68%	129%
Ethanol	64-17-5	46.07	10	8.95	90%		47%	180%
Bromoethene(Vinyl bromide)	593-60-2	106.9	10	10.4	104%		79%	137%
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	10	9.83	98%		81%	129%
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	10	9.52	95%		58%	154%
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	10	9.91	99%		74%	133%
Acetone	67-64-1	58.08	10	10.1	101%		71%	138%
1,1-Dichloroethene	75-35-4	96.94	10	10.0	100%		76%	135%
Acetonitrile	75-05-8	41.00	10	7.25	73%		33%	128%
Tertiary butyl alcohol(TBA)	75-65-0	74.12	10	8.53	85%		38%	153%
Bromoethane(Ethyl bromide)	74-96-4	108.0	10	9.83	98%		70%	134%
3-Chloropropene(Allyl chloride)	107-05-1	76.53	10	10.7	107%		78%	141%
Carbon disulfide	75-15-0	76.14	10	11.3	113%		83%	153%
Methylene chloride	75-09-2	84.94	10	9.44	94%		72%	128%
Acrylonitrile	107-13-1	53.00	10	10.2	102%		67%	140%
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	10	10.1	101%		74%	139%
trans-1,2-Dichloroethene	156-60-5	96.94	10	10.3	103%		75%	133%
n-Hexane	110-54-3	86.17	10	10.6	106%		75%	144%
1,1-Dichloroethane	75-34-3	98.96	10	9.84	98%		73%	132%
Vinyl acetate	108-05-4	86.00	10	13.3	133%		59%	194%
2-Butanone(MEK)	78-93-3	72.10	10	10.5	105%		74%	144%
cis-1,2-Dichloroethene	156-59-2	96.94	10	9.55	96%		70%	129%
Ethyl acetate	141-78-6	88.1	10	8.85	89%		64%	124%

**EMSL Analytical, Inc.**

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 Phone/Fax:(856)858-4800/ (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: ICVS
 EMSL Sample ID: ICVS041415K-10B
 Received Date: NA
 Report Date: 04/15/2015

Project ID: Initial Calibration Verification Standard
 Lab Sample ID: ICVS041415K-10B

Sampling Date: NA
 Canister ID: E0536

Lab File ID: K2969.D
 Sample Vol(ml): 62.5
 Dilution Factor: 1

Analysis Date: 04/15/2015
 Instrument ID: 5973K
 Analyst Initials: KW

Initial Calibration Verification Standard

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)	
							Lower	Upper
Chloroform	67-66-3	119.4	10	10.0	100%		75%	132%
Tetrahydrofuran	109-99-9	72.11	10	9.61	96%		65%	135%
1,1,1-Trichloroethane	71-55-6	133.4	10	9.62	96%		71%	129%
Cyclohexane	110-82-7	84.16	10	10.0	100%		71%	136%
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	10	10.2	102%		70%	137%
Carbon tetrachloride	56-23-5	153.8	10	10.1	101%		75%	134%
n-Heptane	142-82-5	100.2	10	9.82	98%		71%	134%
1,2-Dichloroethane	107-06-2	98.96	10	10.1	101%		75%	135%
Benzene	71-43-2	78.11	10	10.0	100%		69%	136%
Trichloroethene	79-01-6	131.4	10	9.75	98%		73%	132%
1,2-Dichloropropane	78-87-5	113.0	10	9.58	96%		68%	132%
Methyl Methacrylate	80-62-6	100.12	10	10.1	101%		73%	140%
Bromodichloromethane	75-27-4	163.8	10	10.1	101%		76%	137%
1,4-Dioxane	123-91-1	88.12	10	8.66	87%		24%	174%
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	10	10.3	103%		69%	154%
cis-1,3-Dichloropropene	10061-01-5	111.0	10	10.3	103%		77%	141%
Toluene	108-88-3	92.14	10	9.78	98%		72%	135%
trans-1,3-Dichloropropene	10061-02-6	111.0	10	9.54	95%		69%	127%
1,1,2-Trichloroethane	79-00-5	133.4	10	9.58	96%		70%	133%
2-Hexanone(MBK)	591-78-6	100.1	10	10.7	107%		60%	167%
Tetrachloroethene	127-18-4	165.8	10	9.47	95%		70%	131%
Dibromochloromethane	124-48-1	208.3	10	9.72	97%		73%	135%
1,2-Dibromoethane	106-93-4	187.8	10	9.50	95%		70%	129%
Chlorobenzene	108-90-7	112.6	10	9.52	95%		69%	130%
Ethylbenzene	100-41-4	106.2	10	9.74	97%		70%	137%
Xylene (p,m)	1330-20-7	106.2	20	19.5	98%		67%	140%
Xylene (Ortho)	95-47-6	106.2	10	9.61	96%		67%	138%
Styrene	100-42-5	104.1	10	9.53	95%		67%	137%
Isopropylbenzene (cumene)	98-82-8	120.19	10	9.53	95%		64%	143%
Bromoform	75-25-2	252.8	10	9.57	96%		65%	146%
1,1,2,2-Tetrachloroethane	79-34-5	167.9	10	9.25	93%		63%	136%

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax:(856)858-4800/ (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: ICVS
EMSL Sample ID: ICVS041415K-10B
Received Date: NA
Report Date: 04/15/2015

Project ID: Initial Calibration Verification Standard
Lab Sample ID: ICVS041415K-10B

Sampling Date: NA
Canister ID: E0536

Lab File ID: K2969.D
Sample Vol(ml): 62.5
Dilution Factor: 1

Analysis Date: 04/15/2015
Instrument ID: 5973K
Analyst Initials: KW

Initial Calibration Verification Standard

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Spike ppbv	Result ppbv	% Rec	#	Recovery Limits (%)	
							Lower	Upper
4-Ethyltoluene	622-96-8	120.2	10	9.86	99%		76%	144%
1,3,5-Trimethylbenzene	108-67-8	120.2	10	9.70	97%		75%	137%
2-Chlorotoluene	95-49-8	126.6	10	9.62	96%		72%	141%
1,2,4-Trimethylbenzene	95-63-6	120.2	10	9.79	98%		69%	145%
1,3-Dichlorobenzene	541-73-1	147.0	10	9.49	95%		65%	131%
1,4-Dichlorobenzene	106-46-7	147.0	10	9.45	95%		61%	134%
Benzyl chloride	100-44-7	126.0	10	10.3	103%		59%	151%
1,2-Dichlorobenzene	95-50-1	147.0	10	9.24	92%		61%	139%
1,2,4-Trichlorobenzene	120-82-1	181.5	10	7.60	76%		35%	122%
Hexachloro-1,3-butadiene	87-68-3	260.8	10	8.21	82%		39%	143%
Naphthalene	91-20-3	128.17	10	7.93	79%		27%	131%

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

= Compounds outside control limits marked with asterisk (*).

Total Compounds Spiked 73

Total Outside Control Limits 0

% Recoveries within Control Limits 100



NJDEP Certification #: 03036

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Data Path : C:\MSDCHEM\1\DATAK\041415\
 Data File : K2986.D
 Acq On : 15 Apr 2015 5:03 pm
 Operator : KW
 Sample : ECVS041415K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 16 09:21:48 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Bromochloromethane	1.000	1.000	0.0	89	0.00
2 mc	Propylene	0.685	0.698	-1.9	87	0.00
3 mc	Freon 12(Dichlorodifluorome	1.617	1.819	-12.5	91	0.00
4 Mc	Freon 114(1,2-Dichlorotetra	2.243	2.352	-4.9	89	0.00
5 mc	Chloromethane	0.731	0.730	0.1	88	0.00
6 mc	n-Butane	1.417	1.427	-0.7	87	0.00
7 Mc	Vinyl chloride	0.841	0.860	-2.3	89	0.00
8 mc	1,3-Butadiene	0.751	0.773	-2.9	90	0.00
9 Mc	Bromomethane	0.735	0.759	-3.3	91	0.00
10 Mc	Chloroethane	0.462	0.473	-2.4	89	0.00
11 mc	Ethanol	0.218	0.198	9.2	89	-0.02
12 MC	Bromoethene(Vinyl bromide)	0.732	0.748	-2.2	90	0.00
13 Mc	Freon 11(Trichlorofluoromet	2.199	2.311	-5.1	94	0.00
14 mc	Isopropyl alcohol(2-Propano	1.439	1.444	-0.3	91	0.00
15 mc	Freon 113(1,1,2-Trichlorotr	1.663	1.709	-2.8	90	0.00
16 mc	Acetone	1.428	1.443	-1.1	92	0.00
17 mc	1,1-Dichloroethene	1.457	1.520	-4.3	91	0.00
18 MC	Acetonitrile	0.918	0.847	7.7	88	0.00
19 MC	Tertiary butyl alcohol(TBA)	2.254	2.318	-2.8	89	0.00
20 mc	Bromoethane(Ethyl bromide)	0.699	0.717	-2.6	89	0.00
21 MC	3-Chloropropene(Allyl chlor	1.203	1.257	-4.5	89	0.00
22 mc	Carbon disulfide	2.206	2.253	-2.1	89	0.00
23 mc	Methylene chloride	1.076	1.054	2.0	89	0.00
24 MC	Acrylonitrile	0.656	0.655	0.2	84	0.00
25 mc	Methyl-tert-butyl ether(MTB	2.539	2.631	-3.6	90	0.00
26 mc	trans-1,2-Dichloroethene	1.288	1.348	-4.7	92	0.00
27 mc	n-Hexane	1.351	1.400	-3.6	89	0.00
28 mc	1,1-Dichloroethane	1.647	1.686	-2.4	89	0.00
29 mc	Vinyl acetate	1.804	1.884	-4.4	88	0.00
30 mc	2-Butanone(MEK)	1.890	1.920	-1.6	87	0.00
31 mc	cis-1,2-Dichloroethene	0.899	0.930	-3.4	89	0.00
32 mc	Ethyl acetate	2.573	2.638	-2.5	89	0.00
33 mc	Chloroform	1.849	1.929	-4.3	92	0.00
34 mc	Tetrahydrofuran	1.109	1.126	-1.5	87	0.00
35 mc	1,1,1-Trichloroethane	1.931	2.027	-5.0	92	0.00
36 mc	Cyclohexane	1.215	1.265	-4.1	90	0.00
37 MC	2,2,4-Trimethylpentane(Isoo	4.750	4.892	-3.0	89	0.00
38 mc	Carbon tetrachloride	1.923	2.029	-5.5	92	0.00
39 mc	n-Heptane	1.848	1.901	-2.9	89	0.00
40 mc	1,2-Dichloroethane	1.417	1.498	-5.7	94	0.00
41 mc	Benzene	2.765	2.857	-3.3	90	0.00
42	1,4-Difluorobenzene	1.000	1.000	0.0	90	0.00
43 mc	Trichloroethene	0.410	0.414	-1.0	89	0.00
44 mc	1,2-Dichloropropane	0.359	0.363	-1.1	89	0.00
45 mc	Methyl Methacrylate	0.350	0.361	-3.1	89	0.00

Data Path : C:\MSDCHEM\1\DATAK\041415\
 Data File : K2986.D
 Acq On : 15 Apr 2015 5:03 pm
 Operator : KW
 Sample : ECVS041415K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 16 09:21:48 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 mc	Bromodichloromethane	0.691	0.708	-2.5	91	0.00
47 mc	1,4-Dioxane	0.211	0.215	-1.9	105	0.00
48 mc	4-Methyl-2-pentanone (MIBK)	0.807	0.827	-2.5	89	0.00
49 mc	cis-1,3-Dichloropropene	0.538	0.548	-1.9	89	0.00
50 mc	Toluene	1.124	1.150	-2.3	90	0.00
51 mc	trans-1,3-Dichloropropene	0.565	0.582	-3.0	91	0.00
52 mc	1,1,2-Trichloroethane	0.380	0.386	-1.6	91	0.00
53 mc	2-Hexanone (MBK)	0.751	0.774	-3.1	90	0.00
54 mc	Tetrachloroethene	0.531	0.539	-1.5	89	0.00
55 cm	Dibromochloromethane	0.656	0.680	-3.7	91	0.00
56 mc	1,2-Dibromoethane	0.579	0.587	-1.4	90	0.00
57	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00
58 mc	Chlorobenzene	0.997	1.007	-1.0	91	0.00
59 mc	Ethylbenzene	1.687	1.733	-2.7	92	0.00
60 mc	Xylene (p,m)	1.319	1.369	-3.8	92	0.00
61 mc	Xylene (Ortho)	1.338	1.391	-4.0	92	0.00
62 mc	Styrene	1.019	1.062	-4.2	92	0.00
63 mc	Isopropylbenzene (cumene)	1.842	1.916	-4.0	92	0.00
64 mc	Bromoform	0.692	0.721	-4.2	91	0.00
65 mc	1,1,2,2-Tetrachloroethane	0.958	1.007	-5.1	92	0.00
66 S	4-Bromofluorobenzene	0.731	0.756	-3.4	95	0.00
67 cm	4-Ethyltoluene	1.932	2.062	-6.7	93	0.00
68 mc	1,3,5-Trimethylbenzene	1.582	1.692	-7.0	91	0.00
69 MC	2-Chlorotoluene	1.358	1.406	-3.5	93	0.00
70 mc	1,2,4-Trimethylbenzene	1.631	1.762	-8.0	93	0.00
71 mc	1,3-Dichlorobenzene	1.087	1.153	-6.1	92	0.00
72 mc	1,4-Dichlorobenzene	1.090	1.165	-6.9	92	0.00
73 mc	Benzyl chloride	1.501	1.655	-10.3	93	0.00
74 mc	1,2-Dichlorobenzene	1.025	1.093	-6.6	93	0.00
75 mc	1,2,4-Trichlorobenzene	0.935	0.951	-1.7	92	0.00
76 mc	Hexachloro-1,3-butadiene	0.767	0.808	-5.3	93	0.00
77 mc	Naphthalene	2.132	2.172	-1.9	91	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\MSDCHEM\1\DATAK\050515\
 Data File : K3300.D
 Acq On : 5 May 2015 11:24 am
 Operator : KW
 Sample : CCVS050515K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:04:36 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Bromochloromethane	1.000	1.000	0.0	79	0.00
2 mc	Propylene	0.685	0.615	10.2	69	0.00
3 mc	Freon 12(Dichlorodifluorome	1.617	1.266	21.7	56#	0.00
4 Mc	Freon 114(1,2-Dichlorotetra	2.243	2.220	1.0	75	0.00
5 mc	Chloromethane	0.731	0.678	7.3	73	0.00
6 mc	n-Butane	1.417	1.308	7.7	71	0.00
7 Mc	Vinyl chloride	0.841	0.807	4.0	75	0.00
8 mc	1,3-Butadiene	0.751	0.702	6.5	73	0.00
9 Mc	Bromomethane	0.735	0.723	1.6	77	0.00
10 Mc	Chloroethane	0.462	0.444	3.9	75	0.00
11 mc	Ethanol	0.218	0.209	4.1	84	0.01
12 MC	Bromoethene(Vinyl bromide)	0.732	0.715	2.3	76	0.00
13 Mc	Freon 11(Trichlorofluoromet	2.199	2.189	0.5	79	0.00
14 mc	Isopropyl alcohol(2-Propano	1.439	1.357	5.7	76	0.01
15 mc	Freon 113(1,1,2-Trichlorotr	1.663	1.621	2.5	76	0.00
16 mc	Acetone	1.428	1.343	6.0	76	0.00
17 mc	1,1-Dichloroethene	1.457	1.405	3.6	75	0.00
18 MC	Acetonitrile	0.918	0.773	15.8	72	0.00
19 MC	Tertiary butyl alcohol(TBA)	2.254	2.133	5.4	73	0.00
20 mc	Bromoethane(Ethyl bromide)	0.699	0.677	3.1	75	0.00
21 MC	3-Chloropropene(Allyl chlor	1.203	1.104	8.2	70	0.00
22 mc	Carbon disulfide	2.206	2.095	5.0	74	0.00
23 mc	Methylene chloride	1.076	0.957	11.1	72	0.00
24 MC	Acrylonitrile	0.656	0.615	6.3	71	0.00
25 mc	Methyl-tert-butyl ether(MTB	2.539	2.423	4.6	74	0.00
26 mc	trans-1,2-Dichloroethene	1.288	1.227	4.7	75	0.00
27 mc	n-Hexane	1.351	1.271	5.9	72	0.00
28 mc	1,1-Dichloroethane	1.647	1.555	5.6	73	0.00
29 mc	Vinyl acetate	1.804	1.640	9.1	68	0.00
30 mc	2-Butanone(MEK)	1.890	1.717	9.2	70	0.00
31 mc	cis-1,2-Dichloroethene	0.899	0.863	4.0	74	0.00
32 mc	Ethyl acetate	2.573	2.346	8.8	71	0.00
33 mc	Chloroform	1.849	1.795	2.9	76	0.00
34 mc	Tetrahydrofuran	1.109	0.998	10.0	69	0.00
35 mc	1,1,1-Trichloroethane	1.931	1.924	0.4	78	0.00
36 mc	Cyclohexane	1.215	1.179	3.0	75	0.00
37 MC	2,2,4-Trimethylpentane(Isoo	4.750	4.459	6.1	72	0.00
38 mc	Carbon tetrachloride	1.923	1.937	-0.7	79	0.00
39 mc	n-Heptane	1.848	1.673	9.5	70	0.00
40 mc	1,2-Dichloroethane	1.417	1.395	1.6	78	0.00
41 mc	Benzene	2.765	2.628	5.0	74	0.00
42	1,4-Difluorobenzene	1.000	1.000	0.0	75	0.00
43 mc	Trichloroethene	0.410	0.415	-1.2	75	0.00
44 mc	1,2-Dichloropropane	0.359	0.352	1.9	72	0.00
45 mc	Methyl Methacrylate	0.350	0.352	-0.6	72	0.00

Data Path : C:\MSDCHEM\1\DATAK\050515\
 Data File : K3300.D
 Acq On : 5 May 2015 11:24 am
 Operator : KW
 Sample : CCVS050515K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 13:04:36 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 mc	Bromodichloromethane	0.691	0.705	-2.0	76	0.00
47 mc	1,4-Dioxane	0.211	0.216	-2.4	88	0.00
48 mc	4-Methyl-2-pentanone (MIBK)	0.807	0.787	2.5	71	0.00
49 mc	cis-1,3-Dichloropropene	0.538	0.539	-0.2	74	0.00
50 mc	Toluene	1.124	1.137	-1.2	75	0.00
51 mc	trans-1,3-Dichloropropene	0.565	0.576	-1.9	75	0.00
52 mc	1,1,2-Trichloroethane	0.380	0.384	-1.1	76	0.00
53 mc	2-Hexanone (MBK)	0.751	0.737	1.9	72	0.00
54 mc	Tetrachloroethene	0.531	0.542	-2.1	75	0.00
55 cm	Dibromochloromethane	0.656	0.678	-3.4	76	0.00
56 mc	1,2-Dibromoethane	0.579	0.587	-1.4	76	0.00
57	Chlorobenzene-d5	1.000	1.000	0.0	74	0.00
58 mc	Chlorobenzene	0.997	1.028	-3.1	76	0.00
59 mc	Ethylbenzene	1.687	1.743	-3.3	76	0.00
60 mc	Xylene (p,m)	1.319	1.371	-3.9	75	0.00
61 mc	Xylene (Ortho)	1.338	1.380	-3.1	74	0.00
62 mc	Styrene	1.019	1.051	-3.1	75	0.00
63 mc	Isopropylbenzene (cumene)	1.842	1.890	-2.6	74	0.00
64 mc	Bromoform	0.692	0.719	-3.9	75	0.00
65 mc	1,1,2,2-Tetrachloroethane	0.958	0.971	-1.4	73	0.00
66 S	4-Bromofluorobenzene	0.731	0.714	2.3	73	0.00
67 cm	4-Ethyltoluene	1.932	1.983	-2.6	73	0.00
68 mc	1,3,5-Trimethylbenzene	1.582	1.642	-3.8	72	0.00
69 MC	2-Chlorotoluene	1.358	1.369	-0.8	74	0.00
70 mc	1,2,4-Trimethylbenzene	1.631	1.702	-4.4	73	0.00
71 mc	1,3-Dichlorobenzene	1.087	1.088	-0.1	71	0.00
72 mc	1,4-Dichlorobenzene	1.090	1.082	0.7	70	0.00
73 mc	Benzyl chloride	1.501	1.584	-5.5	72	0.00
74 mc	1,2-Dichlorobenzene	1.025	1.071	-4.5	74	0.00
75 mc	1,2,4-Trichlorobenzene	0.935	0.978	-4.6	77	0.00
76 mc	Hexachloro-1,3-butadiene	0.767	0.837	-9.1	79	0.00
77 mc	Naphthalene	2.132	2.230	-4.6	76	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\MSDCHEM\1\DATAK\050515\
 Data File : K3324.D
 Acq On : 6 May 2015 8:17 am
 Operator : KW
 Sample : ECVS050515K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 09:00:28 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Bromochloromethane	1.000	1.000	0.0	60#	0.00
2 mc	Propylene	0.685	0.576	15.9	49#	0.00
3 mc	Freon 12(Dichlorodifluorome	1.617	1.074	33.6#	36#	0.01
4 Mc	Freon 114(1,2-Dichlorotetra	2.243	2.099	6.4	54#	0.00
5 mc	Chloromethane	0.731	0.665	9.0	54#	0.00
6 mc	n-Butane	1.417	1.302	8.1	54#	0.00
7 Mc	Vinyl chloride	0.841	0.800	4.9	56#	0.01
8 mc	1,3-Butadiene	0.751	0.741	1.3	58#	0.01
9 Mc	Bromomethane	0.735	0.748	-1.8	60	0.01
10 Mc	Chloroethane	0.462	0.451	2.4	57#	0.01
11 mc	Ethanol	0.218	0.240	-10.1	73	0.01
12 MC	Bromoethene(Vinyl bromide)	0.732	0.713	2.6	58#	0.01
13 Mc	Freon 11(Trichlorofluoromet	2.199	2.516	-14.4	69	0.01
14 mc	Isopropyl alcohol(2-Propano	1.439	1.493	-3.8	63	0.01
15 mc	Freon 113(1,1,2-Trichlorotr	1.663	1.716	-3.2	61	0.02
16 mc	Acetone	1.428	1.491	-4.4	64	0.00
17 mc	1,1-Dichloroethene	1.457	1.522	-4.5	61	0.01
18 MC	Acetonitrile	0.918	0.792	13.7	56#	0.01
19 MC	Tertiary butyl alcohol(TBA)	2.254	2.343	-3.9	60	0.00
20 mc	Bromoethane(Ethyl bromide)	0.699	0.692	1.0	58#	0.00
21 MC	3-Chloropropene(Allyl chlor	1.203	1.136	5.6	54#	0.01
22 mc	Carbon disulfide	2.206	2.137	3.1	57#	0.01
23 mc	Methylene chloride	1.076	1.002	6.9	57#	0.01
24 MC	Acrylonitrile	0.656	0.619	5.6	54#	0.01
25 mc	Methyl-tert-butyl ether(MTB	2.539	2.590	-2.0	60#	0.00
26 mc	trans-1,2-Dichloroethene	1.288	1.300	-0.9	60#	0.01
27 mc	n-Hexane	1.351	1.264	6.4	54#	0.01
28 mc	1,1-Dichloroethane	1.647	1.623	1.5	58#	0.00
29 mc	Vinyl acetate	1.804	1.699	5.8	53#	0.00
30 mc	2-Butanone(MEK)	1.890	1.796	5.0	55#	0.00
31 mc	cis-1,2-Dichloroethene	0.899	0.871	3.1	56#	0.00
32 mc	Ethyl acetate	2.573	2.464	4.2	56#	0.00
33 mc	Chloroform	1.849	1.989	-7.6	64	0.01
34 mc	Tetrahydrofuran	1.109	0.986	11.1	52#	0.00
35 mc	1,1,1-Trichloroethane	1.931	2.166	-12.2	67	0.00
36 mc	Cyclohexane	1.215	1.184	2.6	57#	0.00
37 MC	2,2,4-Trimethylpentane(Isoo	4.750	4.472	5.9	55#	0.00
38 mc	Carbon tetrachloride	1.923	2.207	-14.8	68	0.00
39 mc	n-Heptane	1.848	1.697	8.2	53#	0.00
40 mc	1,2-Dichloroethane	1.417	1.648	-16.3	70	0.00
41 mc	Benzene	2.765	2.686	2.9	57#	0.00
42	1,4-Difluorobenzene	1.000	1.000	0.0	58#	0.01
43 mc	Trichloroethene	0.410	0.427	-4.1	60#	0.00
44 mc	1,2-Dichloropropane	0.359	0.343	4.5	55#	0.00
45 mc	Methyl Methacrylate	0.350	0.346	1.1	55#	0.00

Data Path : C:\MSDCHEM\1\DATAK\050515\
 Data File : K3324.D
 Acq On : 6 May 2015 8:17 am
 Operator : KW
 Sample : ECVS050515K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 09:00:28 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 mc	Bromodichloromethane	0.691	0.766	-10.9	64	0.00
47 mc	1,4-Dioxane	0.211	0.207	1.9	66	-0.01
48 mc	4-Methyl-2-pentanone (MIBK)	0.807	0.804	0.4	57#	0.00
49 mc	cis-1,3-Dichloropropene	0.538	0.547	-1.7	58#	0.00
50 mc	Toluene	1.124	1.126	-0.2	58#	0.00
51 mc	trans-1,3-Dichloropropene	0.565	0.608	-7.6	62	0.00
52 mc	1,1,2-Trichloroethane	0.380	0.392	-3.2	60	0.00
53 mc	2-Hexanone (MBK)	0.751	0.772	-2.8	59#	0.00
54 mc	Tetrachloroethene	0.531	0.541	-1.9	59#	0.00
55 cm	Dibromochloromethane	0.656	0.712	-8.5	62	0.00
56 mc	1,2-Dibromoethane	0.579	0.597	-3.1	60#	-0.01
57	Chlorobenzene-d5	1.000	1.000	0.0	59#	0.00
58 mc	Chlorobenzene	0.997	1.001	-0.4	59#	0.00
59 mc	Ethylbenzene	1.687	1.732	-2.7	60	0.00
60 mc	Xylene (p,m)	1.319	1.403	-6.4	62	0.00
61 mc	Xylene (Ortho)	1.338	1.402	-4.8	61	0.00
62 mc	Styrene	1.019	1.036	-1.7	59#	0.00
63 mc	Isopropylbenzene (cumene)	1.842	1.927	-4.6	61	0.00
64 mc	Bromoform	0.692	0.745	-7.7	62	0.00
65 mc	1,1,2,2-Tetrachloroethane	0.958	0.941	1.8	56#	0.00
66 S	4-Bromofluorobenzene	0.731	0.781	-6.8	64	0.00
67 cm	4-Ethyltoluene	1.932	1.948	-0.8	58#	0.00
68 mc	1,3,5-Trimethylbenzene	1.582	1.670	-5.6	59#	0.00
69 MC	2-Chlorotoluene	1.358	1.414	-4.1	61	0.00
70 mc	1,2,4-Trimethylbenzene	1.631	1.691	-3.7	58#	0.00
71 mc	1,3-Dichlorobenzene	1.087	1.057	2.8	55#	0.00
72 mc	1,4-Dichlorobenzene	1.090	1.058	2.9	55#	0.00
73 mc	Benzyl chloride	1.501	1.568	-4.5	57#	0.00
74 mc	1,2-Dichlorobenzene	1.025	1.015	1.0	56#	0.00
75 mc	1,2,4-Trichlorobenzene	0.935	1.002	-7.2	63	0.00
76 mc	Hexachloro-1,3-butadiene	0.767	0.864	-12.6	65	0.00
77 mc	Naphthalene	2.132	2.274	-6.7	62	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 1

Data Path : C:\MSDCHEM\1\DATAK\050515\
 Data File : K3325.D
 Acq On : 6 May 2015 10:12 am
 Operator : KW
 Sample : ECVS050515K-10B
 Misc : E0441,62.5,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 12:42:17 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Bromochloromethane	1.000	1.000	0.0	63	0.00
2 mc	Propylene	0.685	0.629	8.2	56#	0.00
3 mc	Freon 12(Dichlorodifluorome	1.617	1.175	27.3	42#	0.00
4 Mc	Freon 114(1,2-Dichlorotetra	2.243	2.246	-0.1	60	0.00
5 mc	Chloromethane	0.731	0.678	7.3	58#	0.00
6 mc	n-Butane	1.417	1.325	6.5	58#	0.00
7 Mc	Vinyl chloride	0.841	0.802	4.6	59#	0.00
8 mc	1,3-Butadiene	0.751	0.746	0.7	61	0.00
9 Mc	Bromomethane	0.735	0.732	0.4	62	0.00
10 Mc	Chloroethane	0.462	0.445	3.7	60#	0.00
11 mc	Ethanol	0.218	0.245	-12.4	78	0.00
12 MC	Bromoethene(Vinyl bromide)	0.732	0.707	3.4	60	0.00
13 Mc	Freon 11(Trichlorofluoromet	2.199	2.454	-11.6	71	0.00
14 mc	Isopropyl alcohol(2-Propano	1.439	1.498	-4.1	67	0.00
15 mc	Freon 113(1,1,2-Trichlorotr	1.663	1.671	-0.5	62	0.00
16 mc	Acetone	1.428	1.464	-2.5	66	0.00
17 mc	1,1-Dichloroethene	1.457	1.495	-2.6	63	0.00
18 MC	Acetonitrile	0.918	0.804	12.4	60#	0.00
19 MC	Tertiary butyl alcohol(TBA)	2.254	2.313	-2.6	63	0.00
20 mc	Bromoethane(Ethyl bromide)	0.699	0.686	1.9	60	0.00
21 MC	3-Chloropropene(Allyl chlor	1.203	1.130	6.1	57#	0.00
22 mc	Carbon disulfide	2.206	2.120	3.9	59#	0.00
23 mc	Methylene chloride	1.076	1.009	6.2	61	0.00
24 MC	Acrylonitrile	0.656	0.617	5.9	56#	0.00
25 mc	Methyl-tert-butyl ether(MTB	2.539	2.567	-1.1	62	0.00
26 mc	trans-1,2-Dichloroethene	1.288	1.279	0.7	62	0.00
27 mc	n-Hexane	1.351	1.265	6.4	57#	0.00
28 mc	1,1-Dichloroethane	1.647	1.625	1.3	61	0.00
29 mc	Vinyl acetate	1.804	1.696	6.0	56#	0.00
30 mc	2-Butanone(MEK)	1.890	1.783	5.7	58#	0.00
31 mc	cis-1,2-Dichloroethene	0.899	0.863	4.0	59#	0.00
32 mc	Ethyl acetate	2.573	2.440	5.2	58#	0.00
33 mc	Chloroform	1.849	1.940	-4.9	65	0.00
34 mc	Tetrahydrofuran	1.109	0.997	10.1	55#	0.00
35 mc	1,1,1-Trichloroethane	1.931	2.124	-10.0	69	0.00
36 mc	Cyclohexane	1.215	1.172	3.5	59#	0.00
37 MC	2,2,4-Trimethylpentane(Isoo	4.750	4.459	6.1	57#	0.00
38 mc	Carbon tetrachloride	1.923	2.165	-12.6	70	0.00
39 mc	n-Heptane	1.848	1.703	7.8	56#	0.00
40 mc	1,2-Dichloroethane	1.417	1.599	-12.8	71	0.00
41 mc	Benzene	2.765	2.654	4.0	59#	0.00
42	1,4-Difluorobenzene	1.000	1.000	0.0	61	0.00
43 mc	Trichloroethene	0.410	0.426	-3.9	62	0.00
44 mc	1,2-Dichloropropane	0.359	0.343	4.5	57#	0.00
45 mc	Methyl Methacrylate	0.350	0.348	0.6	58#	0.00

Data Path : C:\MSDCHEM\1\DATAK\050515\
 Data File : K3325.D
 Acq On : 6 May 2015 10:12 am
 Operator : KW
 Sample : ECVS050515K-10B
 Misc : E0441,62.5,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 12:42:17 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 mc	Bromodichloromethane	0.691	0.753	-9.0	66	0.00
47 mc	1,4-Dioxane	0.211	0.206	2.4	68	0.00
48 mc	4-Methyl-2-pentanone (MIBK)	0.807	0.796	1.4	58#	0.00
49 mc	cis-1,3-Dichloropropene	0.538	0.549	-2.0	61	0.00
50 mc	Toluene	1.124	1.127	-0.3	60#	0.00
51 mc	trans-1,3-Dichloropropene	0.565	0.607	-7.4	64	0.00
52 mc	1,1,2-Trichloroethane	0.380	0.389	-2.4	62	0.00
53 mc	2-Hexanone (MBK)	0.751	0.757	-0.8	60#	0.00
54 mc	Tetrachloroethene	0.531	0.542	-2.1	61	0.00
55 cm	Dibromochloromethane	0.656	0.709	-8.1	64	0.00
56 mc	1,2-Dibromoethane	0.579	0.591	-2.1	62	0.00
57	Chlorobenzene-d5	1.000	1.000	0.0	62	0.00
58 mc	Chlorobenzene	0.997	0.998	-0.1	62	0.00
59 mc	Ethylbenzene	1.687	1.722	-2.1	62	0.00
60 mc	Xylene (p,m)	1.319	1.404	-6.4	64	0.00
61 mc	Xylene (Ortho)	1.338	1.397	-4.4	63	0.00
62 mc	Styrene	1.019	1.033	-1.4	61	0.00
63 mc	Isopropylbenzene (cumene)	1.842	1.912	-3.8	63	0.00
64 mc	Bromoform	0.692	0.736	-6.4	64	0.00
65 mc	1,1,2,2-Tetrachloroethane	0.958	0.929	3.0	58#	0.00
66 S	4-Bromofluorobenzene	0.731	0.769	-5.2	66	0.00
67 cm	4-Ethyltoluene	1.932	1.986	-2.8	61	0.00
68 mc	1,3,5-Trimethylbenzene	1.582	1.604	-1.4	59#	0.00
69 MC	2-Chlorotoluene	1.358	1.410	-3.8	63	0.00
70 mc	1,2,4-Trimethylbenzene	1.631	1.652	-1.3	59#	0.00
71 mc	1,3-Dichlorobenzene	1.087	1.043	4.0	57#	0.00
72 mc	1,4-Dichlorobenzene	1.090	1.044	4.2	56#	0.00
73 mc	Benzyl chloride	1.501	1.538	-2.5	59#	0.00
74 mc	1,2-Dichlorobenzene	1.025	0.983	4.1	57#	0.00
75 mc	1,2,4-Trichlorobenzene	0.935	0.961	-2.8	63	0.00
76 mc	Hexachloro-1,3-butadiene	0.767	0.828	-8.0	65	0.00
77 mc	Naphthalene	2.132	2.191	-2.8	63	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\MSDCHEM\1\DATAK\050615\
 Data File : K3327.D
 Acq On : 6 May 2015 11:52 am
 Operator : KW
 Sample : CCVS050615K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 12:41:39 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Bromochloromethane	1.000	1.000	0.0	62	0.00
2 mc	Propylene	0.685	0.594	13.3	52#	0.00
3 mc	Freon 12(Dichlorodifluorome	1.617	1.831	-13.2	64	0.01
4 Mc	Freon 114(1,2-Dichlorotetra	2.243	2.320	-3.4	62	0.00
5 mc	Chloromethane	0.731	0.652	10.8	55#	0.00
6 mc	n-Butane	1.417	1.282	9.5	55#	0.00
7 Mc	Vinyl chloride	0.841	0.774	8.0	57#	0.00
8 mc	1,3-Butadiene	0.751	0.732	2.5	60#	0.00
9 Mc	Bromomethane	0.735	0.710	3.4	60#	0.00
10 Mc	Chloroethane	0.462	0.429	7.1	57#	0.00
11 mc	Ethanol	0.218	0.180	17.4	57#	0.01
12 MC	Bromoethene(Vinyl bromide)	0.732	0.691	5.6	58#	0.00
13 Mc	Freon 11(Trichlorofluoromet	2.199	2.394	-8.9	68	0.00
14 mc	Isopropyl alcohol(2-Propano	1.439	1.323	8.1	59#	0.02
15 mc	Freon 113(1,1,2-Trichlorotr	1.663	1.651	0.7	61	0.01
16 mc	Acetone	1.428	1.414	1.0	63	0.00
17 mc	1,1-Dichloroethene	1.457	1.467	-0.7	62	0.01
18 MC	Acetonitrile	0.918	0.756	17.6	56#	0.01
19 MC	Tertiary butyl alcohol(TBA)	2.254	2.174	3.5	58#	0.02
20 mc	Bromoethane(Ethyl bromide)	0.699	0.674	3.6	59#	0.00
21 MC	3-Chloropropene(Allyl chlor	1.203	1.100	8.6	55#	0.00
22 mc	Carbon disulfide	2.206	2.053	6.9	57#	0.00
23 mc	Methylene chloride	1.076	0.976	9.3	58#	0.00
24 MC	Acrylonitrile	0.656	0.570	13.1	52#	0.00
25 mc	Methyl-tert-butyl ether(MTB	2.539	2.504	1.4	60	0.00
26 mc	trans-1,2-Dichloroethene	1.288	1.244	3.4	60#	0.00
27 mc	n-Hexane	1.351	1.242	8.1	56#	0.01
28 mc	1,1-Dichloroethane	1.647	1.581	4.0	59#	0.00
29 mc	Vinyl acetate	1.804	1.618	10.3	53#	0.00
30 mc	2-Butanone(MEK)	1.890	1.721	8.9	55#	0.00
31 mc	cis-1,2-Dichloroethene	0.899	0.851	5.3	58#	0.00
32 mc	Ethyl acetate	2.573	2.372	7.8	56#	0.00
33 mc	Chloroform	1.849	1.905	-3.0	64	0.00
34 mc	Tetrahydrofuran	1.109	0.994	10.4	54#	0.00
35 mc	1,1,1-Trichloroethane	1.931	2.090	-8.2	67	0.00
36 mc	Cyclohexane	1.215	1.168	3.9	58#	0.00
37 MC	2,2,4-Trimethylpentane(Isoo	4.750	4.442	6.5	57#	0.00
38 mc	Carbon tetrachloride	1.923	2.122	-10.3	68	0.00
39 mc	n-Heptane	1.848	1.695	8.3	56#	0.00
40 mc	1,2-Dichloroethane	1.417	1.571	-10.9	69	0.00
41 mc	Benzene	2.765	2.621	5.2	58#	0.00
42	1,4-Difluorobenzene	1.000	1.000	0.0	60#	0.01
43 mc	Trichloroethene	0.410	0.430	-4.9	61	0.00
44 mc	1,2-Dichloropropane	0.359	0.345	3.9	56#	0.00
45 mc	Methyl Methacrylate	0.350	0.346	1.1	56#	0.00

Data Path : C:\MSDCHEM\1\DATAK\050615\
 Data File : K3327.D
 Acq On : 6 May 2015 11:52 am
 Operator : KW
 Sample : CCVS050615K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 12:41:39 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 mc	Bromodichloromethane	0.691	0.757	-9.6	65	0.00
47 mc	1,4-Dioxane	0.211	0.214	-1.4	69	0.00
48 mc	4-Methyl-2-pentanone (MIBK)	0.807	0.802	0.6	57#	0.00
49 mc	cis-1,3-Dichloropropene	0.538	0.553	-2.8	60#	0.00
50 mc	Toluene	1.124	1.136	-1.1	59#	0.00
51 mc	trans-1,3-Dichloropropene	0.565	0.606	-7.3	63	0.00
52 mc	1,1,2-Trichloroethane	0.380	0.386	-1.6	60	0.00
53 mc	2-Hexanone (MBK)	0.751	0.764	-1.7	59#	0.00
54 mc	Tetrachloroethene	0.531	0.545	-2.6	60	0.00
55 cm	Dibromochloromethane	0.656	0.710	-8.2	63	0.00
56 mc	1,2-Dibromoethane	0.579	0.595	-2.8	61	-0.01
57	Chlorobenzene-d5	1.000	1.000	0.0	59#	0.00
58 mc	Chlorobenzene	0.997	1.028	-3.1	60	0.00
59 mc	Ethylbenzene	1.687	1.781	-5.6	61	0.00
60 mc	Xylene (p,m)	1.319	1.436	-8.9	63	0.00
61 mc	Xylene (Ortho)	1.338	1.443	-7.8	62	0.00
62 mc	Styrene	1.019	1.066	-4.6	60	0.00
63 mc	Isopropylbenzene (cumene)	1.842	1.991	-8.1	62	0.00
64 mc	Bromoform	0.692	0.764	-10.4	63	0.00
65 mc	1,1,2,2-Tetrachloroethane	0.958	1.002	-4.6	60#	0.00
66 S	4-Bromofluorobenzene	0.731	0.744	-1.8	61	0.00
67 cm	4-Ethyltoluene	1.932	2.078	-7.6	61	0.01
68 mc	1,3,5-Trimethylbenzene	1.582	1.805	-14.1	63	0.00
69 MC	2-Chlorotoluene	1.358	1.450	-6.8	62	0.00
70 mc	1,2,4-Trimethylbenzene	1.631	1.852	-13.5	63	0.00
71 mc	1,3-Dichlorobenzene	1.087	1.178	-8.4	61	0.00
72 mc	1,4-Dichlorobenzene	1.090	1.174	-7.7	61	0.00
73 mc	Benzyl chloride	1.501	1.736	-15.7	63	0.00
74 mc	1,2-Dichlorobenzene	1.025	1.145	-11.7	63	0.00
75 mc	1,2,4-Trichlorobenzene	0.935	0.994	-6.3	62	0.00
76 mc	Hexachloro-1,3-butadiene	0.767	0.857	-11.7	64	0.00
77 mc	Naphthalene	2.132	2.272	-6.6	62	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\MSDCHEM\1\DATAK\050615\
 Data File : K3342.D
 Acq On : 7 May 2015 2:14 am
 Operator : KW
 Sample : ECVS050615K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 12:58:47 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Bromochloromethane	1.000	1.000	0.0	72	0.00
2 mc	Propylene	0.685	0.624	8.9	63	0.00
3 mc	Freon 12(Dichlorodifluorome	1.617	1.520	6.0	61	0.00
4 Mc	Freon 114(1,2-Dichlorotetra	2.243	2.255	-0.5	69	-0.01
5 mc	Chloromethane	0.731	0.666	8.9	65	-0.01
6 mc	n-Butane	1.417	1.300	8.3	64	-0.01
7 Mc	Vinyl chloride	0.841	0.794	5.6	67	0.00
8 mc	1,3-Butadiene	0.751	0.712	5.2	67	0.00
9 Mc	Bromomethane	0.735	0.706	3.9	68	0.00
10 Mc	Chloroethane	0.462	0.439	5.0	67	-0.01
11 mc	Ethanol	0.218	0.223	-2.3	81	0.01
12 MC	Bromoethene(Vinyl bromide)	0.732	0.703	4.0	68	-0.01
13 Mc	Freon 11(Trichlorofluoromet	2.199	2.271	-3.3	74	-0.01
14 mc	Isopropyl alcohol(2-Propano	1.439	1.414	1.7	72	0.00
15 mc	Freon 113(1,1,2-Trichlorotr	1.663	1.637	1.6	69	0.00
16 mc	Acetone	1.428	1.396	2.2	71	-0.01
17 mc	1,1-Dichloroethene	1.457	1.443	1.0	70	0.00
18 MC	Acetonitrile	0.918	0.787	14.3	66	0.00
19 MC	Tertiary butyl alcohol(TBA)	2.254	2.205	2.2	68	0.00
20 mc	Bromoethane(Ethyl bromide)	0.699	0.671	4.0	67	-0.01
21 MC	3-Chloropropene(Allyl chlor	1.203	1.116	7.2	64	0.00
22 mc	Carbon disulfide	2.206	2.077	5.8	66	0.00
23 mc	Methylene chloride	1.076	0.985	8.5	67	0.00
24 MC	Acrylonitrile	0.656	0.616	6.1	64	0.00
25 mc	Methyl-tert-butyl ether(MTB	2.539	2.478	2.4	68	-0.01
26 mc	trans-1,2-Dichloroethene	1.288	1.248	3.1	69	0.00
27 mc	n-Hexane	1.351	1.272	5.8	65	0.00
28 mc	1,1-Dichloroethane	1.647	1.570	4.7	67	-0.01
29 mc	Vinyl acetate	1.804	1.679	6.9	63	-0.01
30 mc	2-Butanone(MEK)	1.890	1.741	7.9	64	0.00
31 mc	cis-1,2-Dichloroethene	0.899	0.855	4.9	66	0.00
32 mc	Ethyl acetate	2.573	2.380	7.5	65	-0.01
33 mc	Chloroform	1.849	1.843	0.3	71	0.00
34 mc	Tetrahydrofuran	1.109	1.002	9.6	63	0.00
35 mc	1,1,1-Trichloroethane	1.931	1.977	-2.4	73	0.00
36 mc	Cyclohexane	1.215	1.163	4.3	66	0.00
37 MC	2,2,4-Trimethylpentane(Isoo	4.750	4.436	6.6	65	0.00
38 mc	Carbon tetrachloride	1.923	2.000	-4.0	73	0.00
39 mc	n-Heptane	1.848	1.696	8.2	64	0.00
40 mc	1,2-Dichloroethane	1.417	1.467	-3.5	74	0.00
41 mc	Benzene	2.765	2.639	4.6	67	0.00
42	1,4-Difluorobenzene	1.000	1.000	0.0	70	0.01
43 mc	Trichloroethene	0.410	0.408	0.5	68	0.00
44 mc	1,2-Dichloropropane	0.359	0.341	5.0	65	0.00
45 mc	Methyl Methacrylate	0.350	0.342	2.3	65	0.00

Data Path : C:\MSDCHEM\1\DATAK\050615\
 Data File : K3342.D
 Acq On : 7 May 2015 2:14 am
 Operator : KW
 Sample : ECVS050615K-10
 Misc : E0441,62.5,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 12:58:47 2015
 Quant Method : C:\MSDCHEM\1\METHODS\Q041415.M
 Quant Title : TO-15 Determination of VOCs in Air
 QLast Update : Wed Apr 15 09:38:52 2015
 Response via : Initial Calibration

Min. RRF : 0.001 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 mc	Bromodichloromethane	0.691	0.706	-2.2	71	0.00
47 mc	1,4-Dioxane	0.211	0.210	0.5	79	0.00
48 mc	4-Methyl-2-pentanone (MIBK)	0.807	0.774	4.1	65	0.00
49 mc	cis-1,3-Dichloropropene	0.538	0.531	1.3	67	0.00
50 mc	Toluene	1.124	1.106	1.6	67	0.00
51 mc	trans-1,3-Dichloropropene	0.565	0.574	-1.6	70	0.00
52 mc	1,1,2-Trichloroethane	0.380	0.379	0.3	69	0.00
53 mc	2-Hexanone (MBK)	0.751	0.729	2.9	66	0.00
54 mc	Tetrachloroethene	0.531	0.526	0.9	68	0.00
55 cm	Dibromochloromethane	0.656	0.674	-2.7	70	0.00
56 mc	1,2-Dibromoethane	0.579	0.573	1.0	68	0.00
57	Chlorobenzene-d5	1.000	1.000	0.0	71	0.00
58 mc	Chlorobenzene	0.997	0.977	2.0	69	0.00
59 mc	Ethylbenzene	1.687	1.671	0.9	69	0.00
60 mc	Xylene (p,m)	1.319	1.337	-1.4	70	0.00
61 mc	Xylene (Ortho)	1.338	1.350	-0.9	69	0.00
62 mc	Styrene	1.019	1.019	0.0	69	0.00
63 mc	Isopropylbenzene (cumene)	1.842	1.862	-1.1	70	0.00
64 mc	Bromoform	0.692	0.714	-3.2	71	0.00
65 mc	1,1,2,2-Tetrachloroethane	0.958	0.954	0.4	68	0.00
66 S	4-Bromofluorobenzene	0.731	0.760	-4.0	74	0.00
67 cm	4-Ethyltoluene	1.932	1.925	0.4	68	0.01
68 mc	1,3,5-Trimethylbenzene	1.582	1.657	-4.7	70	0.00
69 MC	2-Chlorotoluene	1.358	1.359	-0.1	70	0.00
70 mc	1,2,4-Trimethylbenzene	1.631	1.716	-5.2	70	0.00
71 mc	1,3-Dichlorobenzene	1.087	1.095	-0.7	68	0.00
72 mc	1,4-Dichlorobenzene	1.090	1.092	-0.2	68	0.00
73 mc	Benzyl chloride	1.501	1.599	-6.5	70	0.00
74 mc	1,2-Dichlorobenzene	1.025	1.066	-4.0	71	0.00
75 mc	1,2,4-Trichlorobenzene	0.935	0.947	-1.3	71	0.00
76 mc	Hexachloro-1,3-butadiene	0.767	0.808	-5.3	73	0.00
77 mc	Naphthalene	2.132	2.149	-0.8	70	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800/ (856)858-4571

<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: Method Blank

EMSL Sample ID: MB041415K

Received Date: NA

Report Date: 04/15/2015

Project ID: Method Blank

Lab Sample ID: MB041415K

Sampling Date: NA

Canister ID: E15636

Lab File ID: K2971.D

Sample Vol(ml): 250

Dilution Factor: 1

Analysis Date: 04/15/2015

Instrument ID: 5973K

Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
Propylene	115-07-1	42.08	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	0.50	U	3.5	
Chloromethane	74-87-3	50.49	0.50	U	1.0	
n-Butane	106-97-8	58.12	0.50	U	1.2	
Vinyl chloride	75-01-4	62.50	0.50	U	1.3	
1,3-Butadiene	106-99-0	54.09	0.50	U	1.1	
Bromomethane	74-83-9	94.94	0.50	U	1.9	
Chloroethane	75-00-3	64.52	0.50	U	1.3	
Ethanol	64-17-5	46.07	0.50	U	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.50	U	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	0.50	U	3.8	
Acetone	67-64-1	58.08	0.50	U	1.2	
1,1-Dichloroethene	75-35-4	96.94	0.50	U	2.0	
Acetonitrile	75-05-8	41.00	0.50	U	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.50	U	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	0.50	U	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	0.50	U	1.6	
Carbon disulfide	75-15-0	76.14	0.50	U	1.6	
Methylene chloride	75-09-2	84.94	0.50	U	1.7	
Acrylonitrile	107-13-1	53.00	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	0.50	U	2.0	
n-Hexane	110-54-3	86.17	0.50	U	1.8	
1,1-Dichloroethane	75-34-3	98.96	0.50	U	2.0	
Vinyl acetate	108-05-4	86.00	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.50	U	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	0.50	U	2.0	
Ethyl acetate	141-78-6	88.1	0.50	U	1.8	

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800/ (856)858-4571

<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order: Method Blank

EMSL Sample ID: MB041415K

Received Date: NA

Report Date: 04/15/2015

Project ID: Method Blank

Lab Sample ID: MB041415K

Sampling Date: NA

Canister ID: E15636

Lab File ID: K2971.D

Sample Vol(ml): 250

Dilution Factor: 1

Analysis Date: 04/15/2015

Instrument ID: 5973K

Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
Chloroform	67-66-3	119.4	0.50	U	2.4	
Tetrahydrofuran	109-99-9	72.11	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	0.50	U	2.7	
Cyclohexane	110-82-7	84.16	0.50	U	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	0.50	U	2.3	
Carbon tetrachloride	56-23-5	153.8	0.50	U	3.1	
n-Heptane	142-82-5	100.2	0.50	U	2.0	
1,2-Dichloroethane	107-06-2	98.96	0.50	U	2.0	
Benzene	71-43-2	78.11	0.50	U	1.6	
Trichloroethene	79-01-6	131.4	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113.0	0.50	U	2.3	
Methyl Methacrylate	80-62-6	100.12	0.50	U	2.0	
Bromodichloromethane	75-27-4	163.8	0.50	U	3.3	
1,4-Dioxane	123-91-1	88.12	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	0.50	U	2.3	
Toluene	108-88-3	92.14	0.50	U	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100.1	0.50	U	2.0	
Tetrachloroethene	127-18-4	165.8	0.50	U	3.4	
Dibromochloromethane	124-48-1	208.3	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	187.8	0.50	U	3.8	
Chlorobenzene	108-90-7	112.6	0.50	U	2.3	
Ethylbenzene	100-41-4	106.2	0.50	U	2.2	
Xylene (p,m)	1330-20-7	106.2	1.0	U	4.3	
Xylene (Ortho)	95-47-6	106.2	0.50	U	2.2	
Styrene	100-42-5	104.1	0.50	U	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	0.50	U	2.5	
Bromoform	75-25-2	252.8	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.50	U	3.4	

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EMSL Order: Method Blank
EMSL Sample ID: MB041415K
Received Date: NA
Report Date: 04/15/2015

Project ID: Method Blank
Lab Sample ID: MB041415K

Sampling Date: NA
Canister ID: E15636

Lab File ID: K2971.D
Sample Vol(ml): 250
Dilution Factor: 1

Analysis Date: 04/15/2015
Instrument ID: 5973K
Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
4-Ethyltoluene	622-96-8	120.2	0.50	U	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.50	U	2.5	
2-Chlorotoluene	95-49-8	126.6	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	0.50	U	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	0.50	U	3.0	
Benzyl chloride	100-44-7	126.0	0.50	U	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	0.50	U	5.3	
Naphthalene	91-20-3	128.17	0.50	U	2.6	
Total Target Compounds:			0.0		0.0	

Surrogate

4-Bromofluorobenzene

Result

9.8

Spike

10

Recovery

98%

Qualifier Definitions

U- Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.

J- Estimated value reported below adjusted reporting limit for target compounds.

B- Compound found in associated method blank as well as in the sample.

D- Compound reported from additional diluted analysis.

E- Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.



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EMSL Order: Method Blank

EMSL Sample ID: MB041415K

Received Date: NA

Report Date: 04/15/2015

Project ID: Method Blank
Lab Sample ID: MB041415KSampling Date: NA
Canister ID: E15636Lab File ID: K2971.D
Sample Vol(ml): 250
Dilution Factor: 1Analysis Date: 04/15/2015
Instrument ID: 5973K
Analyst Initials: KW**Method Blank- Tentatively Identified Compound Results Summary**

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
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No Tentatively Identified Compounds (TICs) Reported**Qualifier Definitions**

(1)- If compound is unknown, MW is assigned as Toluene (92) for ug/m3 conversion purposes.

J- Estimated value for TICs based on a 1:1 response to internal standards assumed.

N- Indicates presumptive evidence of a compound based on library search match.

B- Compound found in associated method blank as well as in the sample.

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EMSL Order: Method Blank
EMSL Sample ID: MB050515K
Received Date: NA
Report Date: 05/27/2015

Project ID: Method Blank
Lab Sample ID: MB050515K

Sampling Date: NA
Canister ID: E15636

Lab File ID: K3301.D
Sample Vol(ml): 250
Dilution Factor: 1

Analysis Date: 05/05/2015
Instrument ID: 5973K
Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
Propylene	115-07-1	42.08	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	0.50	U	3.5	
Chloromethane	74-87-3	50.49	0.50	U	1.0	
n-Butane	106-97-8	58.12	0.50	U	1.2	
Vinyl chloride	75-01-4	62.50	0.50	U	1.3	
1,3-Butadiene	106-99-0	54.09	0.50	U	1.1	
Bromomethane	74-83-9	94.94	0.50	U	1.9	
Chloroethane	75-00-3	64.52	0.50	U	1.3	
Ethanol	64-17-5	46.07	0.50	U	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.50	U	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	0.50	U	3.8	
Acetone	67-64-1	58.08	0.50	U	1.2	
1,1-Dichloroethene	75-35-4	96.94	0.50	U	2.0	
Acetonitrile	75-05-8	41.00	0.50	U	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.50	U	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	0.50	U	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	0.50	U	1.6	
Carbon disulfide	75-15-0	76.14	0.50	U	1.6	
Methylene chloride	75-09-2	84.94	0.50	U	1.7	
Acrylonitrile	107-13-1	53.00	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	0.50	U	2.0	
n-Hexane	110-54-3	86.17	0.50	U	1.8	
1,1-Dichloroethane	75-34-3	98.96	0.50	U	2.0	
Vinyl acetate	108-05-4	86.00	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.50	U	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	0.50	U	2.0	
Ethyl acetate	141-78-6	88.1	0.50	U	1.8	

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EMSL Order: Method Blank

EMSL Sample ID: MB050515K

Received Date: NA

Report Date: 05/27/2015

Project ID: Method Blank

Lab Sample ID: MB050515K

Sampling Date: NA

Canister ID: E15636

Lab File ID: K3301.D

Sample Vol(ml): 250

Dilution Factor: 1

Analysis Date: 05/05/2015

Instrument ID: 5973K

Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
Chloroform	67-66-3	119.4	0.50	U	2.4	
Tetrahydrofuran	109-99-9	72.11	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	0.50	U	2.7	
Cyclohexane	110-82-7	84.16	0.50	U	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	0.50	U	2.3	
Carbon tetrachloride	56-23-5	153.8	0.50	U	3.1	
n-Heptane	142-82-5	100.2	0.50	U	2.0	
1,2-Dichloroethane	107-06-2	98.96	0.50	U	2.0	
Benzene	71-43-2	78.11	0.50	U	1.6	
Trichloroethene	79-01-6	131.4	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113.0	0.50	U	2.3	
Methyl Methacrylate	80-62-6	100.12	0.50	U	2.0	
Bromodichloromethane	75-27-4	163.8	0.50	U	3.3	
1,4-Dioxane	123-91-1	88.12	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	0.50	U	2.3	
Toluene	108-88-3	92.14	0.50	U	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100.1	0.50	U	2.0	
Tetrachloroethene	127-18-4	165.8	0.50	U	3.4	
Dibromochloromethane	124-48-1	208.3	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	187.8	0.50	U	3.8	
Chlorobenzene	108-90-7	112.6	0.50	U	2.3	
Ethylbenzene	100-41-4	106.2	0.50	U	2.2	
Xylene (p,m)	1330-20-7	106.2	1.0	U	4.3	
Xylene (Ortho)	95-47-6	106.2	0.50	U	2.2	
Styrene	100-42-5	104.1	0.50	U	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	0.50	U	2.5	
Bromoform	75-25-2	252.8	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.50	U	3.4	

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EMSL Order: Method Blank

EMSL Sample ID: MB050515K

Received Date: NA

Report Date: 05/27/2015

Project ID: Method Blank

Lab Sample ID: MB050515K

Sampling Date: NA

Canister ID: E15636

Lab File ID: K3301.D

Sample Vol(ml): 250

Dilution Factor: 1

Analysis Date: 05/05/2015

Instrument ID: 5973K

Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
4-Ethyltoluene	622-96-8	120.2	0.50	U	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.50	U	2.5	
2-Chlorotoluene	95-49-8	126.6	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	0.50	U	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	0.50	U	3.0	
Benzyl chloride	100-44-7	126.0	0.50	U	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	0.50	U	5.3	
Naphthalene	91-20-3	128.17	0.50	U	2.6	
Total Target Compounds:			0.0		0.0	

Surrogate

4-Bromofluorobenzene

Result

9.6

Spike

10

Recovery

96%

Qualifier Definitions

U- Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.

J- Estimated value reported below adjusted reporting limit for target compounds.

B- Compound found in associated method blank as well as in the sample.

D- Compound reported from additional diluted analysis.

E- Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.



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EMSL Order: Method Blank
EMSL Sample ID: MB050515K
Received Date: NA
Report Date: 05/27/2015

Project ID: Method Blank
Lab Sample ID: MB050515K

Lab File ID: K3301.D
Sample Vol(ml): 250
Dilution Factor: 1

Sampling Date: NA
Canister ID: E15636

Analysis Date: 05/05/2015
Instrument ID: 5973K
Analyst Initials: KW

Method Blank- Tentatively Identified Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
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No Tentatively Identified Compounds (TICs) Reported

Qualifier Definitions

- (1)- If compound is unknown, MW is assigned as Toluene (92) for ug/m3 conversion purposes.
J- Estimated value for TICs based on a 1:1 response to internal standards assumed.
N- Indicates presumptive evidence of a compound based on library search match.
B- Compound found in associated method blank as well as in the sample.



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EMSL Order: Method Blank

EMSL Sample ID: MB050615K

Received Date: NA

Report Date: 05/28/2015

Project ID: Method Blank

Lab Sample ID: MB050615K

Sampling Date: NA

Canister ID: E15636

Lab File ID: K3328.D

Sample Vol(ml): 250

Dilution Factor: 1

Analysis Date: 05/06/2015

Instrument ID: 5973K

Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
Propylene	115-07-1	42.08	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	0.50	U	3.5	
Chloromethane	74-87-3	50.49	0.50	U	1.0	
n-Butane	106-97-8	58.12	0.50	U	1.2	
Vinyl chloride	75-01-4	62.50	0.50	U	1.3	
1,3-Butadiene	106-99-0	54.09	0.50	U	1.1	
Bromomethane	74-83-9	94.94	0.50	U	1.9	
Chloroethane	75-00-3	64.52	0.50	U	1.3	
Ethanol	64-17-5	46.07	0.50	U	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.50	U	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	0.50	U	3.8	
Acetone	67-64-1	58.08	0.50	U	1.2	
1,1-Dichloroethene	75-35-4	96.94	0.50	U	2.0	
Acetonitrile	75-05-8	41.00	0.50	U	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.50	U	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	0.50	U	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	0.50	U	1.6	
Carbon disulfide	75-15-0	76.14	0.50	U	1.6	
Methylene chloride	75-09-2	84.94	0.50	U	1.7	
Acrylonitrile	107-13-1	53.00	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	0.50	U	2.0	
n-Hexane	110-54-3	86.17	0.50	U	1.8	
1,1-Dichloroethane	75-34-3	98.96	0.50	U	2.0	
Vinyl acetate	108-05-4	86.00	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72.10	0.50	U	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	0.50	U	2.0	
Ethyl acetate	141-78-6	88.1	0.50	U	1.8	

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EMSL Order: Method Blank

EMSL Sample ID: MB050615K

Received Date: NA

Report Date: 05/28/2015

Project ID: Method Blank

Lab Sample ID: MB050615K

Sampling Date: NA

Canister ID: E15636

Lab File ID: K3328.D

Sample Vol(ml): 250

Dilution Factor: 1

Analysis Date: 05/06/2015

Instrument ID: 5973K

Analyst Initials: KW

Method Blank- Target Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
Chloroform	67-66-3	119.4	0.50	U	2.4	
Tetrahydrofuran	109-99-9	72.11	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	0.50	U	2.7	
Cyclohexane	110-82-7	84.16	0.50	U	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	0.50	U	2.3	
Carbon tetrachloride	56-23-5	153.8	0.50	U	3.1	
n-Heptane	142-82-5	100.2	0.50	U	2.0	
1,2-Dichloroethane	107-06-2	98.96	0.50	U	2.0	
Benzene	71-43-2	78.11	0.50	U	1.6	
Trichloroethene	79-01-6	131.4	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113.0	0.50	U	2.3	
Methyl Methacrylate	80-62-6	100.12	0.50	U	2.0	
Bromodichloromethane	75-27-4	163.8	0.50	U	3.3	
1,4-Dioxane	123-91-1	88.12	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	0.50	U	2.3	
Toluene	108-88-3	92.14	0.50	U	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100.1	0.50	U	2.0	
Tetrachloroethene	127-18-4	165.8	0.50	U	3.4	
Dibromochloromethane	124-48-1	208.3	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	187.8	0.50	U	3.8	
Chlorobenzene	108-90-7	112.6	0.50	U	2.3	
Ethylbenzene	100-41-4	106.2	0.50	U	2.2	
Xylene (p,m)	1330-20-7	106.2	1.0	U	4.3	
Xylene (Ortho)	95-47-6	106.2	0.50	U	2.2	
Styrene	100-42-5	104.1	0.50	U	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	0.50	U	2.5	
Bromoform	75-25-2	252.8	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.50	U	3.4	

**EMSL Analytical, Inc.**

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EMSL Order: Method Blank

EMSL Sample ID: MB050615K

Received Date: NA

Report Date: 05/28/2015

Project ID: Method Blank
Lab Sample ID: MB050615KSampling Date: NA
Canister ID: E15636Lab File ID: K3328.D
Sample Vol(ml): 250
Dilution Factor: 1Analysis Date: 05/06/2015
Instrument ID: 5973K
Analyst Initials: KW**Method Blank- Target Compound Results Summary**

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Comments
4-Ethyltoluene	622-96-8	120.2	0.50	U	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	0.50	U	2.5	
2-Chlorotoluene	95-49-8	126.6	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	0.50	U	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	0.50	U	3.0	
Benzyl chloride	100-44-7	126.0	0.50	U	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	0.50	U	5.3	
Naphthalene	91-20-3	128.17	0.50	U	2.6	
Total Target Compounds:			0.0		0.0	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions

U- Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.

J- Estimated value reported below adjusted reporting limit for target compounds.

B- Compound found in associated method blank as well as in the sample.

D- Compound reported from additional diluted analysis.

E- Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.



NJDEP Certification #: 03036

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EMSL Order: Method Blank
EMSL Sample ID: MB050615K
Received Date: NA
Report Date: 05/28/2015

Project ID: Method Blank
Lab Sample ID: MB050615K

Lab File ID: K3328.D
Sample Vol(ml): 250
Dilution Factor: 1

Sampling Date: NA
Canister ID: E15636

Analysis Date: 05/06/2015
Instrument ID: 5973K
Analyst Initials: KW

Method Blank- Tentatively Identified Compound Results Summary

USEPA: Compendium Method TO-15, January 1999, (EPA/625/R-96/010b).

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time
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No Tentatively Identified Compounds (TICs) Reported**Qualifier Definitions**

(1)- If compound is unknown, MW is assigned as Toluene (92) for ug/m3 conversion purposes.

J- Estimated value for TICs based on a 1:1 response to internal standards assumed.

N- Indicates presumptive evidence of a compound based on library search match.

B- Compound found in associated method blank as well as in the sample.

**NJDEP Certification #: 03036**Please visit our website at <http://www.emsl.com>

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