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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15 (5&20 ppbv)

INVENTORY SHEET

Work Order #: 1506153B

	Page Nos. From	Page Nos. To
1. Work Order Cover Page & Laboratory Narrative	1	4
a. Lumen Validation Report	--	--
2. Sample Results and Raw Data (Organized by Sample)	5	33
a. ATL Sample Results Form		
b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results+ Raw Data)	34	40
b. Surrogate Recover Summary Form (If Applicable)	41	41
c. Internal Standard Summary Form (If Applicable)	42	42
d. Duplicate Results Summary Sheet	--	--
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	43	51
g. MDL Study (If Applicable)	--	--
h. Continuing Calibration Verification Data (Summary Sheet	52	57
i. Second Source LCS(Summary + Raw Data)	--	--
j. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	58	58
l. GC/MS Tune (Results + Raw Data)	59	62
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	63	64
b. Chain-of-Custody Records	65	65
c. Sample Log-In Sheet	66	66
d. Misc Shipping/Receiving Records (list of individual records)		
Sample Receipt Discrepancy Report	--	--
5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
b. Manual Integrations	--	--
c. Manual Calculations	--	--
d. Canister Dilution Factors	67	69
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	70	70
g. Variance Table	--	--
h. Canister Certification	--	--
i. Data Review Check Sheet	71	72

Comments:

Completed by:

Kara McKiernan	Kara McKiernan / Document Control	6/17/15
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1506153B

Work Order Summary

CLIENT:	Mr. Terry Taylor Anderson Mulholland & Associates, Inc. 2700 Westchester Avenue Suite 417 Purchase, NY 10577	**BILL TO:**	Accounts Payable Anderson Mulholland & Associates, Inc. 2700 Westchester Avenue Suite 417 Purchase, NY 10577
PHONE:	(914) 251-0400	**P.O. #**	
FAX:		**PROJECT #**	BMS Humacao Building 6 Indoor Air
DATE RECEIVED:	06/09/2015	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	06/15/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	B6-1IA-2	Modified TO-15 (5&20 ppbv	5.1 "Hg	4.7 psi
02A	B6-2IA-2	Modified TO-15 (5&20 ppbv	5.7 "Hg	5.1 psi
03A	B6-2IAD-2	Modified TO-15 (5&20 ppbv	3.7 "Hg	5 psi
04A	B6-AA-3	Modified TO-15 (5&20 ppbv	6.3 "Hg	4.9 psi
05A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
06A	CCV	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 06/15/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
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LABORATORY NARRATIVE
EPA Method TO-15 Soil Gas
Anderson Mulholland & Associates, Inc.
Workorder# 1506153B

Four 6 Liter Summa Canister (100% Certified) samples were received on June 09, 2015. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for Methanol was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
B6-1IA-2	1506153B-01A	6/ 7/2015	6/ 9/2015	NA	5	6/12/2015	NA	Good
B6-2IA-2	1506153B-02A	6/ 7/2015	6/ 9/2015	NA	5	6/12/2015	NA	Good
B6-2IAD-2	1506153B-03A	6/ 7/2015	6/ 9/2015	NA	5	6/12/2015	NA	Good
B6-AA-3	1506153B-04A	6/ 7/2015	6/ 9/2015	NA	5	6/12/2015	NA	Good
Lab Blank	1506153B-05A	NA	NA	NA	NA	6/12/2015	NA	Good
CCV	1506153B-06A	NA	NA	NA	NA	6/12/2015	NA	Good

Sample Results and Raw Data

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS

Client Sample ID: B6-1IA-2

Lab ID#: 1506153B-01A

No Detections Were Found.

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Client Sample ID: B6-1IA-2

Lab ID#: 1506153B-01A

EPA METHOD TO-15 GC/MS

File Name:	**14061205**	**Date of Collection:**	**6/7/15 6:04:00 PM**
Dil. Factor:	**1.59**	**Date of Analysis:**	**6/12/15 11:46 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	80	Not Detected	100	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	101	70-130

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AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061205.d
Lab Smp Id: 1506153B-01A
Inj Date : 12-JUN-2015 11:46
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #33902
Misc Info : 5.1"Hg -> 4.7psi
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 15-Jun-2015 06:34 mchen Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1
Dil Factor: 1.59000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	99102	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	79758			45.12- 105.12	80.48
4.749	4.749 (1.000)	49	144018			101.60- 161.60	145.32
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	432096	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	68114			0.00- 45.35	15.76
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	386587	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	213739			23.98- 83.98	55.29
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	146289	409.068	409.07	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	72394			18.29- 78.29	49.49
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.258)	98	422652	385.249	385.25	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	46887			0.00- 41.01	11.09

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	286171			34.42- 94.42	67.71
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	207651	403.988	403.99	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	284316			103.22- 163.22	136.92
9.283	9.283	(1.090)	176	200960			67.52- 127.52	96.78

Report Date: 15-Jun-2015 06:36

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061205.d
Lab Smp Id: 1506153B-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 5.1"Hg -> 4.7psi

Calibration Date: 12-JUN-2015
Calibration Time: 11:00

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	99102	0.88
92 1,4-Difluorobenze	405774	243464	568084	432096	6.49
125 Chlorobenzene-d5	374046	224428	523664	386587	3.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 15-Jun-2015 06:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12jun15
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1506153B-01A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 5.1"Hg -> 4.7psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	409.07	102.27	70-130
$ 107 Toluene-d8	400.00	385.25	96.31	70-130
$ 138 Bromofluorobenzene	400.00	403.99	101.00	70-130

Data File: /chem/msd14.i/12jun15.b/14061205.d

Date : 12-JUN-2015 11:46

Client ID:

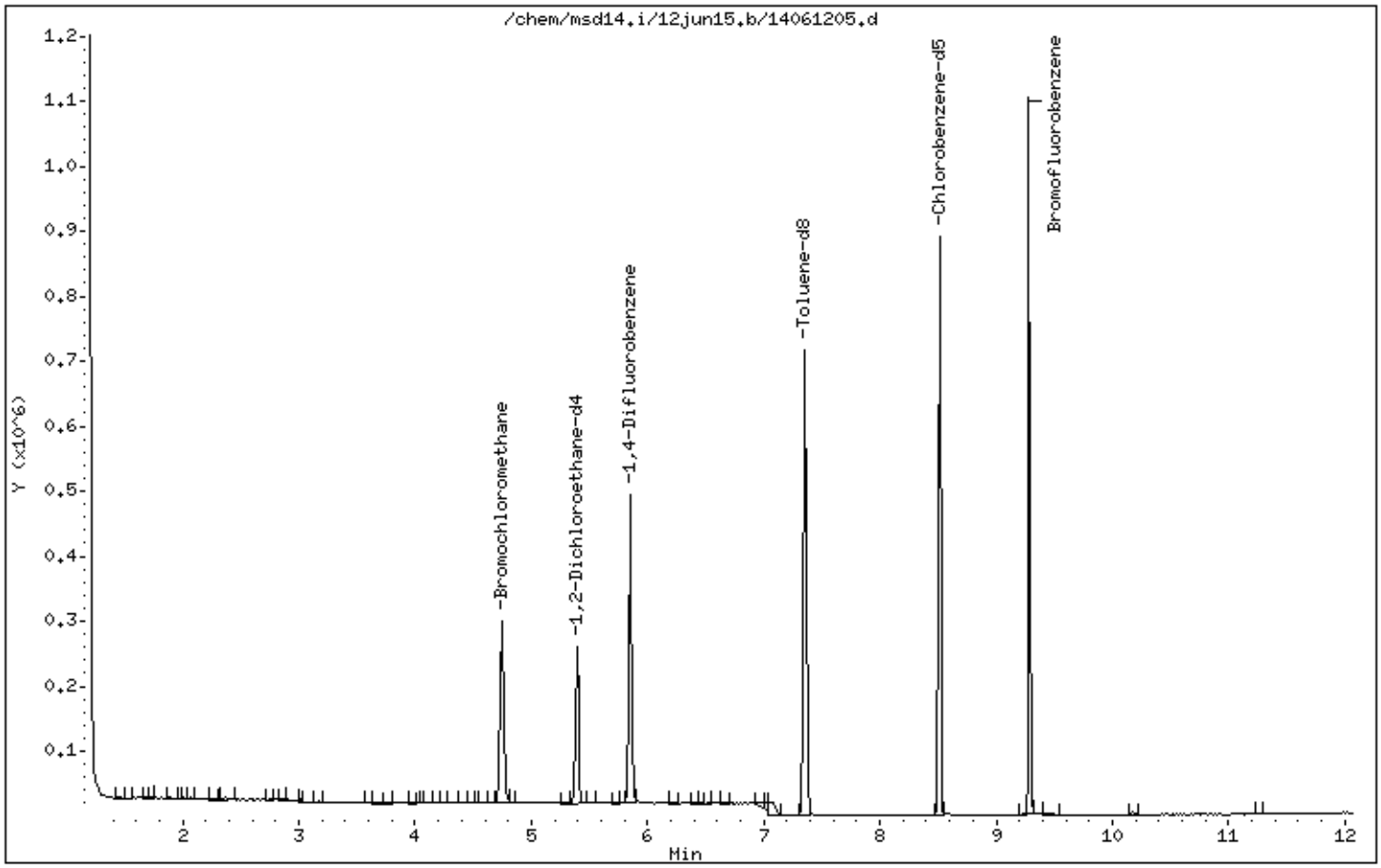
Instrument: msd14.i

Sample Info: 50ml #33902

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS

Client Sample ID: B6-2IA-2

Lab ID#: 1506153B-02A

No Detections Were Found.

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Client Sample ID: B6-2IA-2

Lab ID#: 1506153B-02A

EPA METHOD TO-15 GC/MS

File Name:	**14061206**	**Date of Collection:**	**6/7/15 5:41:00 PM**
Dil. Factor:	**1.66**	**Date of Analysis:**	**6/12/15 12:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	83	Not Detected	110	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061206.d
Lab Smp Id: 1506153B-02A
Inj Date : 12-JUN-2015 12:11
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #6L0054
Misc Info : 5.7"Hg -> 5.1psi
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 15-Jun-2015 06:34 mchen Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1
Dil Factor: 1.66000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	99061	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	76557			45.12- 105.12	77.28
4.749	4.749 (1.000)	49	143579			101.60- 161.60	144.94
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	418334	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	68126			0.00- 45.35	16.29
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	383762	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	213148			23.98- 83.98	55.54
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	147476	412.558	412.56	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	72846			18.29- 78.29	49.40
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.258)	98	423697	398.907	398.91	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	46364			0.00- 41.01	10.94

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	278300			34.42- 94.42	65.68
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	204654	401.089	401.09	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	278949			103.22- 163.22	136.30
9.283	9.283	(1.090)	176	196315			67.52- 127.52	95.93

Report Date: 15-Jun-2015 06:36

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061206.d
Lab Smp Id: 1506153B-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 5.7"Hg -> 5.1psi

Calibration Date: 12-JUN-2015
Calibration Time: 11:00

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	99061	0.84
92 1,4-Difluorobenze	405774	243464	568084	418334	3.10
125 Chlorobenzene-d5	374046	224428	523664	383762	2.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 15-Jun-2015 06:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12jun15
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1506153B-02A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 5.7"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	412.56	103.14	70-130
$ 107 Toluene-d8	400.00	398.91	99.73	70-130
$ 138 Bromofluorobenzene	400.00	401.09	100.27	70-130

Data File: /chem/msd14.i/12jun15.b/14061206.d

Date : 12-JUN-2015 12:11

Client ID:

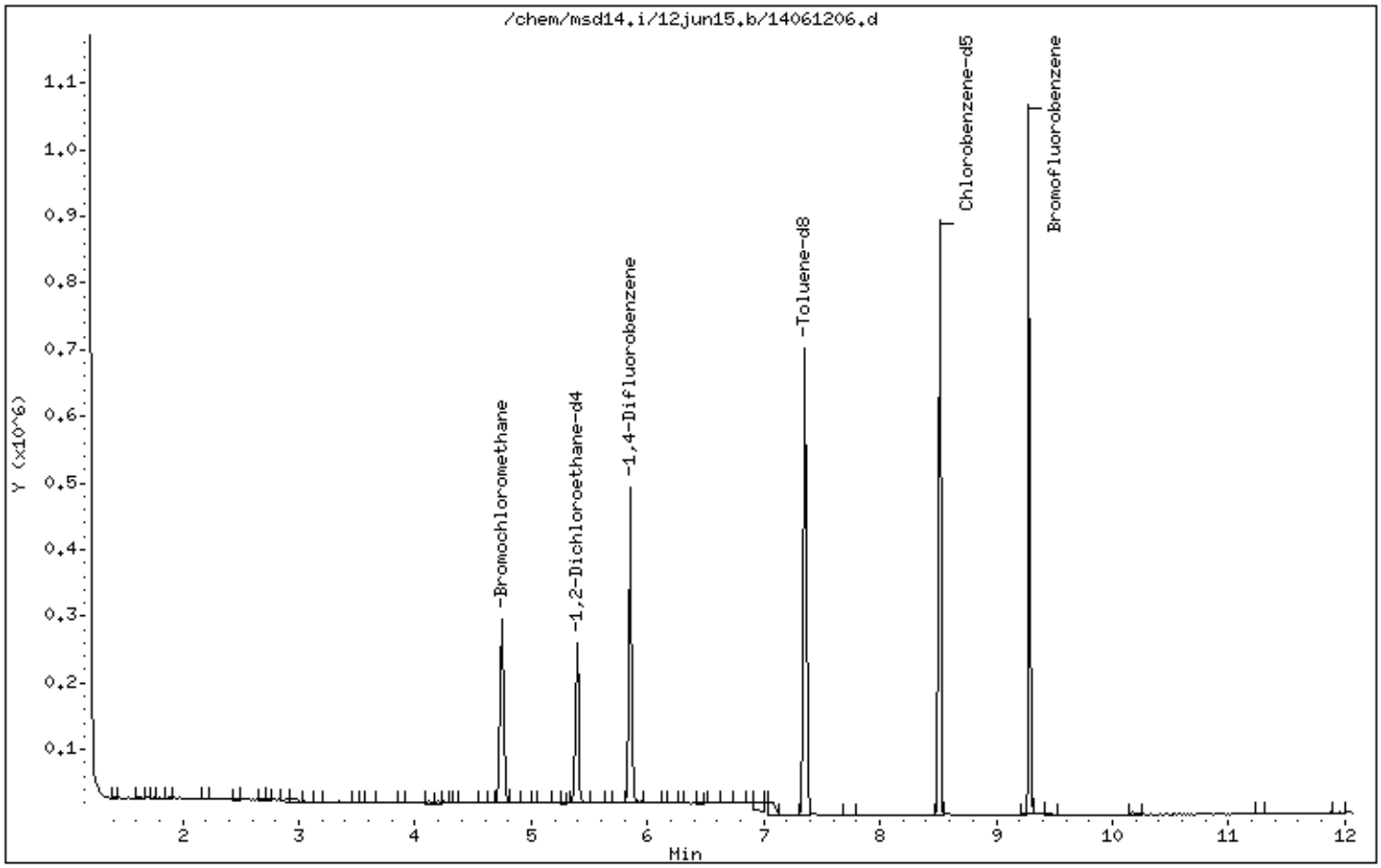
Instrument: msd14.i

Sample Info: 50ml #6L0054

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



Summary of Detected Compounds
EPA METHOD TO-15 GC/MS

Client Sample ID: B6-2IAD-2

Lab ID#: 1506153B-03A

No Detections Were Found.

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Client Sample ID: B6-2IAD-2

Lab ID#: 1506153B-03A

EPA METHOD TO-15 GC/MS

File Name:	**14061207**	**Date of Collection:**	**6/7/15 5:40:00 PM**
Dil. Factor:	**1.53**	**Date of Analysis:**	**6/12/15 12:31 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	76	Not Detected	100	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061207.d
Lab Smp Id: 1506153B-03A
Inj Date : 12-JUN-2015 12:31
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #23925
Misc Info : 3.7"Hg -> 5psi
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 15-Jun-2015 06:34 mchen Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1
Dil Factor: 1.53000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	99162	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	77543			45.12- 105.12	78.20
4.749	4.749 (1.000)	49	143484			101.60- 161.60	144.70
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	419581	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	66332			0.00- 45.35	15.81
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	378388	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	211574			23.98- 83.98	55.91
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	146676	409.902	409.90	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	73393			18.29- 78.29	50.04
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.258)	98	417180	391.605	391.60	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	46525			0.00- 41.01	11.15

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	278150			34.42- 94.42	66.67
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	205731	408.924	408.92	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	279108			103.22- 163.22	135.67
9.283	9.283	(1.090)	176	195610			67.52- 127.52	95.08

Report Date: 15-Jun-2015 06:36

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061207.d
Lab Smp Id: 1506153B-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 3.7"Hg -> 5psi

Calibration Date: 12-JUN-2015
Calibration Time: 11:00

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	99162	0.94
92 1,4-Difluorobenze	405774	243464	568084	419581	3.40
125 Chlorobenzene-d5	374046	224428	523664	378388	1.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 15-Jun-2015 06:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12jun15
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1506153B-03A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 3.7"Hg -> 5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	409.90	102.48	70-130
$ 107 Toluene-d8	400.00	391.60	97.90	70-130
$ 138 Bromofluorobenzene	400.00	408.92	102.23	70-130

Data File: /chem/msd14.i/12jun15.b/14061207.d

Date : 12-JUN-2015 12:31

Client ID:

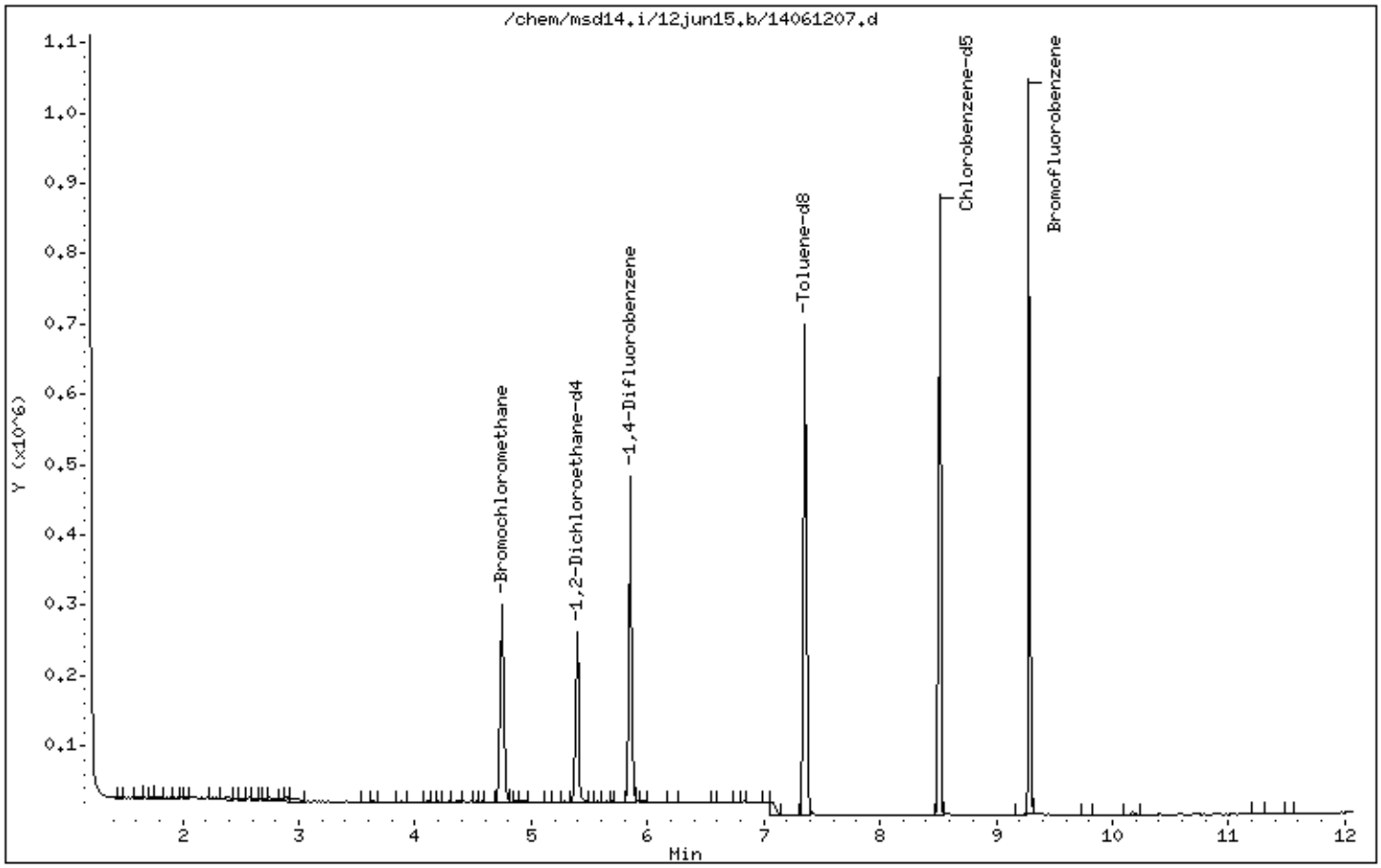
Instrument: msd14.i

Sample Info: 50ml #23925

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS

Client Sample ID: B6-AA-3

Lab ID#: 1506153B-04A

No Detections Were Found.

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Client Sample ID: B6-AA-3

Lab ID#: 1506153B-04A

EPA METHOD TO-15 GC/MS

File Name:	**14061208**	**Date of Collection:**	**6/7/15 5:49:00 PM**
Dil. Factor:	**1.69**	**Date of Analysis:**	**6/12/15 12:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	84	Not Detected	110	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061208.d
Lab Smp Id: 1506153B-04A
Inj Date : 12-JUN-2015 12:52
Operator : cb Inst ID: msd14.i
Smp Info : 50ml #22509
Misc Info : 6.3"Hg -> 4.9psi
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 15-Jun-2015 06:34 mchen Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1
Dil Factor: 1.69000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	96812	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	76517			45.12- 105.12	79.04
4.749	4.749 (1.000)	49	142200			101.60- 161.60	146.88
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.860	5.846 (1.000)	114	412491	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	65471			0.00- 45.35	15.87
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	379877	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	210628			23.98- 83.98	55.45
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	143674	411.260	411.26	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	72790			18.29- 78.29	50.66
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.255)	98	417398	398.543	398.54	80.00- 120.00	100.00
7.352	7.352 (1.255)	70	46563			0.00- 41.01	11.16

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.255)	100	272968			34.42- 94.42	65.40
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	204001	403.898	403.90	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	276812			103.22- 163.22	135.69
9.283	9.283	(1.090)	176	192481			67.52- 127.52	94.35

Report Date: 15-Jun-2015 06:36

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061208.d
Lab Smp Id: 1506153B-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 6.3"Hg -> 4.9psi

Calibration Date: 12-JUN-2015
Calibration Time: 11:00

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	96812	-1.45
92 1,4-Difluorobenze	405774	243464	568084	412491	1.66
125 Chlorobenzene-d5	374046	224428	523664	379877	1.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.86	0.25
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 15-Jun-2015 06:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12jun15
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1506153B-04A
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 6.3"Hg -> 4.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	411.26	102.81	70-130
$ 107 Toluene-d8	400.00	398.54	99.64	70-130
$ 138 Bromofluorobenzene	400.00	403.90	100.97	70-130

Data File: /chem/msd14.i/12jun15.b/14061208.d

Date : 12-JUN-2015 12:52

Client ID:

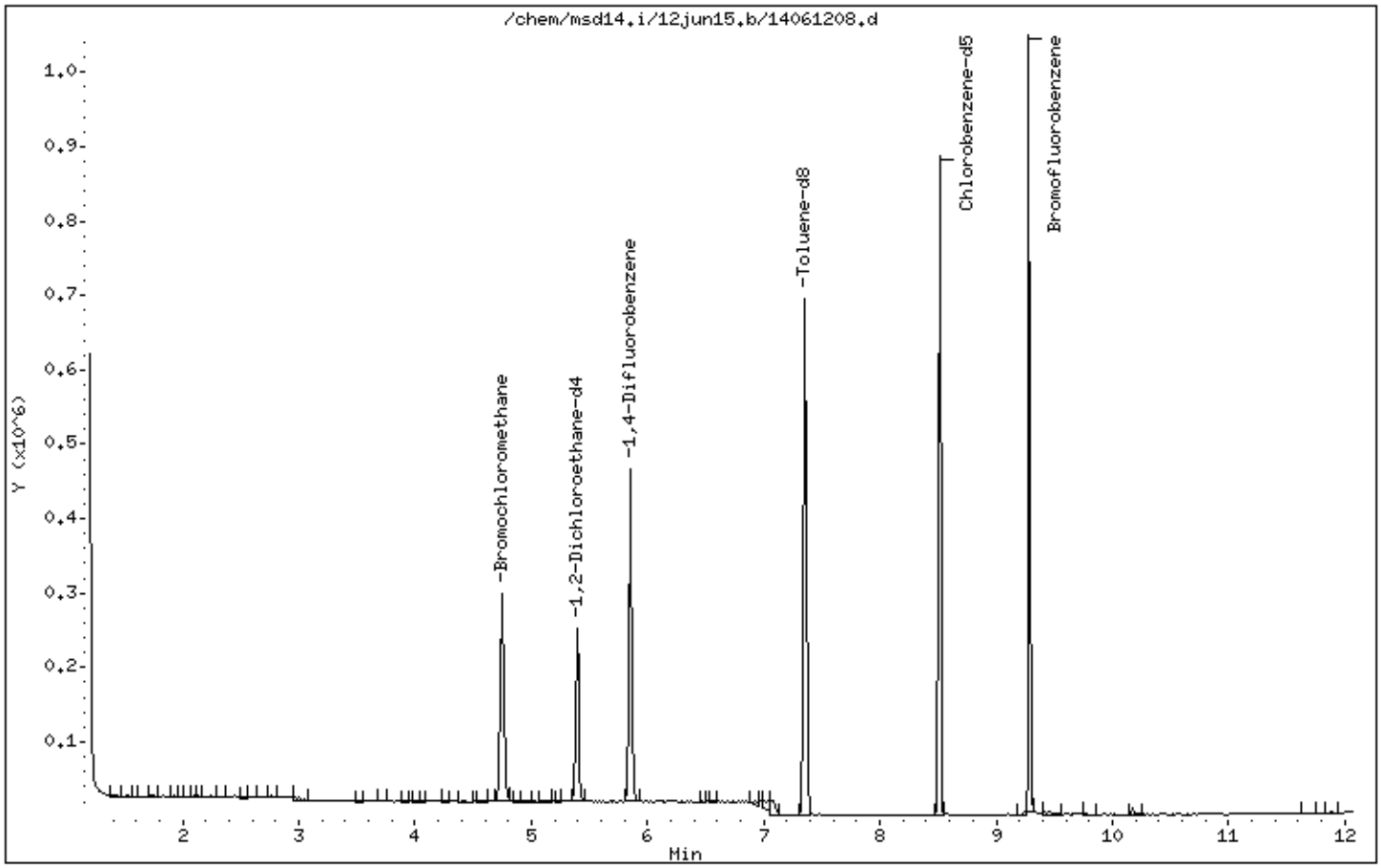
Instrument: msd14.i

Sample Info: 50ml #22509

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



QC Results and Raw Data

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Client Sample ID: Lab Blank

Lab ID#: 1506153B-05A

EPA METHOD TO-15 GC/MS

File Name:	**14061204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/12/15 11:25 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methanol	50	Not Detected	66	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061204.d
Lab Smp Id: Lab Blank
Inj Date : 12-JUN-2015 11:25
Operator : cb Inst ID: msd14.i
Smp Info : 50mL #34343
Misc Info : Humid
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 12-Jun-2015 11:27 mskidmor Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	104791	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	78234			45.12- 105.12	74.66
4.749	4.749 (1.000)	49	146801			101.60- 161.60	140.09
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	441554	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	70756			0.00- 45.35	16.02
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	396817	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	217977			23.98- 83.98	54.93
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	151455	400.523	400.52	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	77794			18.29- 78.29	51.36
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.258)	98	440282	392.723	392.72	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	49648			0.00- 41.01	11.28

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)								
7.352	7.352	(1.258)	100	290860			34.42- 94.42	66.06
$ 138 Bromofluorobenzene						CAS #: 460-00-4		
9.283	9.283	(1.090)	174	214386	406.339	406.34	80.00- 120.00	100.00
9.283	9.283	(1.090)	95	294260			103.22- 163.22	137.26
9.283	9.283	(1.090)	176	206060			67.52- 127.52	96.12

Report Date: 12-Jun-2015 11:44

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061204.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: Humid

Calibration Date: 12-JUN-2015
Calibration Time: 11:00

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	104791	6.67
92 1,4-Difluorobenze	405774	243464	568084	441554	8.82
125 Chlorobenzene-d5	374046	224428	523664	396817	6.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 12-Jun-2015 11:44

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12jun15
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Level: LOW
Operator: cb
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 200.spk
Quant Type: ISTD
Sublist File: MeOH.sub
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 84 1,2-Dichloroethane	400.00	400.52	100.13	70-130
$ 107 Toluene-d8	400.00	392.72	98.18	70-130
$ 138 Bromofluorobenzene	400.00	406.34	101.58	70-130

Data File: /chem/msd14.i/12jun15.b/14061204.d

Date : 12-JUN-2015 11:25

Client ID:

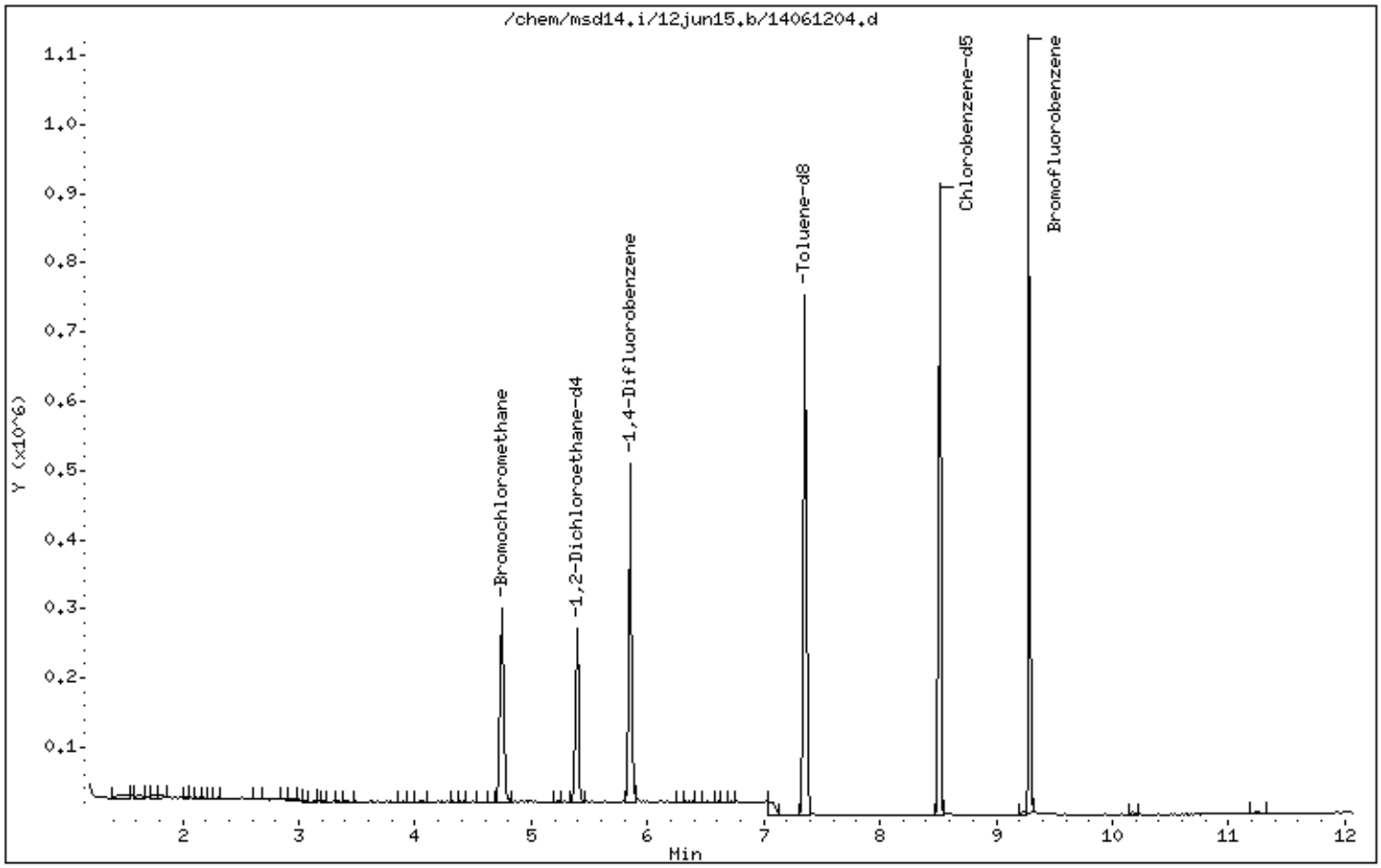
Instrument: msd14.i

Sample Info: 50mL #34343

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1506153B

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B6-1IA-2	102		96		101				0
02	B6-2IA-2	103		100		100				0
03	B6-2IAD-2	102		98		102				0
04	B6-AA-3	103		100		101				0
05	Lab Blank	100		98		102				0
06	CCV	100		100		100				0
07										0
08										0
09										0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

1,2-Dichloroethane-d4 70 - 130
Toluene-d8 70 - 130
4-Bromofluorobenzene 70 - 130

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

EPA Method TO-15 GC/MS

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1506153B
Lab File ID:	14061203c.d	Date Analyzed:	06/12/2015
Instrument ID:	msd14.i	Time Analyzed:	11:00 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	374046		8.51		405774		5.85		98234		4.75	
	UPPER LIMIT	523664		08.84		568084		06.18		137528		05.08	
	LOWER LIMIT	224428		08.18		243464		05.52		58940		04.42	
	CLIENT SAMPLE NO												
01	B6-1IA-2	386587		8.51		432096		5.85		99102		4.75	
02	B6-2IA-2	383762		8.51		418334		5.85		99061		4.75	
03	B6-2IAD-2	378388		8.51		419581		5.85		99162		4.75	
04	B6-AA-3	379877		8.51		412491		5.86		96812		4.75	
05	Lab Blank	396817		8.51		441554		5.85		104791		4.75	
06	CCV	374046		8.51		405774		5.85		98234		4.75	
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUN-2015 11:00
End Cal Date : 12-JUN-2015 11:00
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/12jun15.b/MEOH0612a.m
Cal Date : 12-Jun-2015 11:27 mskidmor
Curve Type : Average

Calibration File Names:
Level 2: /chem/msd14.i/12jun15.b/14061203.d

Compound	50.000 Level 2	___ RRF	% RSD
14 Methanol	33.59350	33.59350	0.000
M 193 1,2-Dichloroethene	+++++	+++++	+++++
$ 84 1,2-Dichloroethane-d4	1.44342	1.44342	0.000
$ 107 Toluene-d8	1.01559	1.01559	0.000
$ 138 Bromofluorobenzene	0.53184	0.53184	0.000

Calibration History

Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Start Cal Date: 12-JUN-2015 11:00
End Cal Date : 12-JUN-2015 11:00

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 50.00000		
12-JUN-2015 11:00	MeOH	/chem/msd14.i/12jun15.b/14061203.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 2

Ccal Level: 2 , Ccal Amount: 50.000		
12-JUN-2015 11:00	MeOH	/chem/msd14.i/12jun15.b/14061203.d
Ccal Level: 2 , Ccal Amount: 50.000		
12-JUN-2015 11:00	MeOH	/chem/msd14.i/12jun15.b/14061203a.d

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

CB
6/12/15

Start Cal Date : 12-JUN-2015 11:00
End Cal Date : 12-JUN-2015 11:00
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/12jun15.b/MEOH0612a.m
Cal Date : 12-Jun-2015 11:27 mskidmor
Curve Type : Average

Calibration File Names:
Level 2: /chem/msd14.i/12jun15.b/14061203.d

Compound	50.000 Level 2	RRF	% RSD
14 Methanol	33.59350	33.59350	0.000
M 193 1,2-Dichloroethene	+++++	+++++	+++++
$ 84 1,2-Dichloroethane-d4	1.44342	1.44342	0.000
$ 107 Toluene-d8	1.01559	1.01559	0.000
$ 138 Bromofluorobenzene	0.53184	0.53184	0.000

MEOH0612a.M
Initial Calibration Narrative

A 1-point Methanol initial calibration was analyzed on MSD-14 on 04/14/15.

No ICV or MDL needed.

BFB Tune file - 14061201

Eurofins Air Toxics, Inc. **MSD-14** **Logbook #2728**

BFB Verification of 176/174 m/z Ratio:	13896/14186 x 100 = 97.96%
Tekmar Purge Flow:	NA
Vacuum:	3.81×10^{-6}

IS/S Std. #:	2736-31	Exp. Date:	9/1/15
BCM		98234	
1,4-DFB		405774	
CB-d5		374046	

Verified CCV IS vs ICAL mid-point (-40%D): CB

File ID:	14061203
Compound:	toluene-d8
Initials:	CB

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \frac{\text{Conc}_{\text{IS}}}{\text{RRF}}$ = (412102) x (400) = 400.00
(405774) (1.01559)

SOP# (Circle one): 6 / 83 / 38 / (91) / 109

Method (Circle one): TO-14A/TO-15/TO-17

Reported Result: 400.00

Method Name: MeOH 0612A

	Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	14061201	BFB Tune Check	2299-805	50ng	2mL	1.00	CB	6/12/15	0944	CB	
2	✓	02	System Blank	34343	Humid	50mL	↓	CB	↓	1036	CB	
3	✓	03	ICAL Level 2	2736-15	50ppbv	12.5mL	↓	CB	↓	1100	CB	exp 7/27/15
4		~~04~~	~~Lab Blank~~	~~34343~~	~~Humid~~	~~50mL~~		~~CB~~				
5												
6												
7												
8												
9												
10												
11												
12												
13												
14										CB	6/12/15	

Reviewed

6/12/15
Date

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061203.d
Lab Smp Id: ICAL Level 2 Client Smp ID: ICAL Level 2
Inj Date : 12-JUN-2015 11:00
Operator : cb Inst ID: msd14.i
Smp Info : 12.5ml #2736-15
Misc Info : 50ppbv (200ppbv)
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 12-Jun-2015 11:24 mskidmor Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	98234	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	75966			45.12- 105.12	77.33
4.749	4.749 (1.000)	49	138452			101.60- 161.60	140.94
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	405774	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	64843			0.00- 45.35	15.98
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	374046	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	204377			23.98- 83.98	54.64
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	141793	400.000	400.00	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	72722			18.29- 78.29	51.29
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.258)	98	412102	400.000	400.00	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	45968			0.00- 41.01	11.15

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)							
7.352	7.352 (1.258)	100	271934			34.42- 94.42	65.99
$ 138 Bromofluorobenzene					CAS #: 460-00-4		
9.283	9.283 (1.090)	174	198932	400.000	400.00	80.00- 120.00	100.00
9.283	9.283 (1.090)	95	280206			103.22- 163.22	140.86
9.283	9.283 (1.090)	176	189599			67.52- 127.52	95.31
14 Methanol					CAS #: 67-56-1		
1.728	1.728 (0.364)	31	412503	50.0000	50.000	80.00- 120.00	100.00
1.913	1.913 (0.403)	29	1857			0.00- 30.99	0.45
1.728	1.728 (0.364)	32	328121			61.63- 121.63	79.54

Report Date: 12-Jun-2015 11:24

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061203.d
Lab Smp Id: ICAL Level 2
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 50ppbv (200ppbv)

Calibration Date: 12-JUN-2015
Calibration Time: 11:00
Client Smp ID: ICAL Level 2
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	98234	0.00
92 1,4-Difluorobenze	405774	243464	568084	405774	0.00
125 Chlorobenzene-d5	374046	224428	523664	374046	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd14.i/12jun15.b/14061203.d

Date : 12-JUN-2015 11:00

Client ID: ICAL Level 2

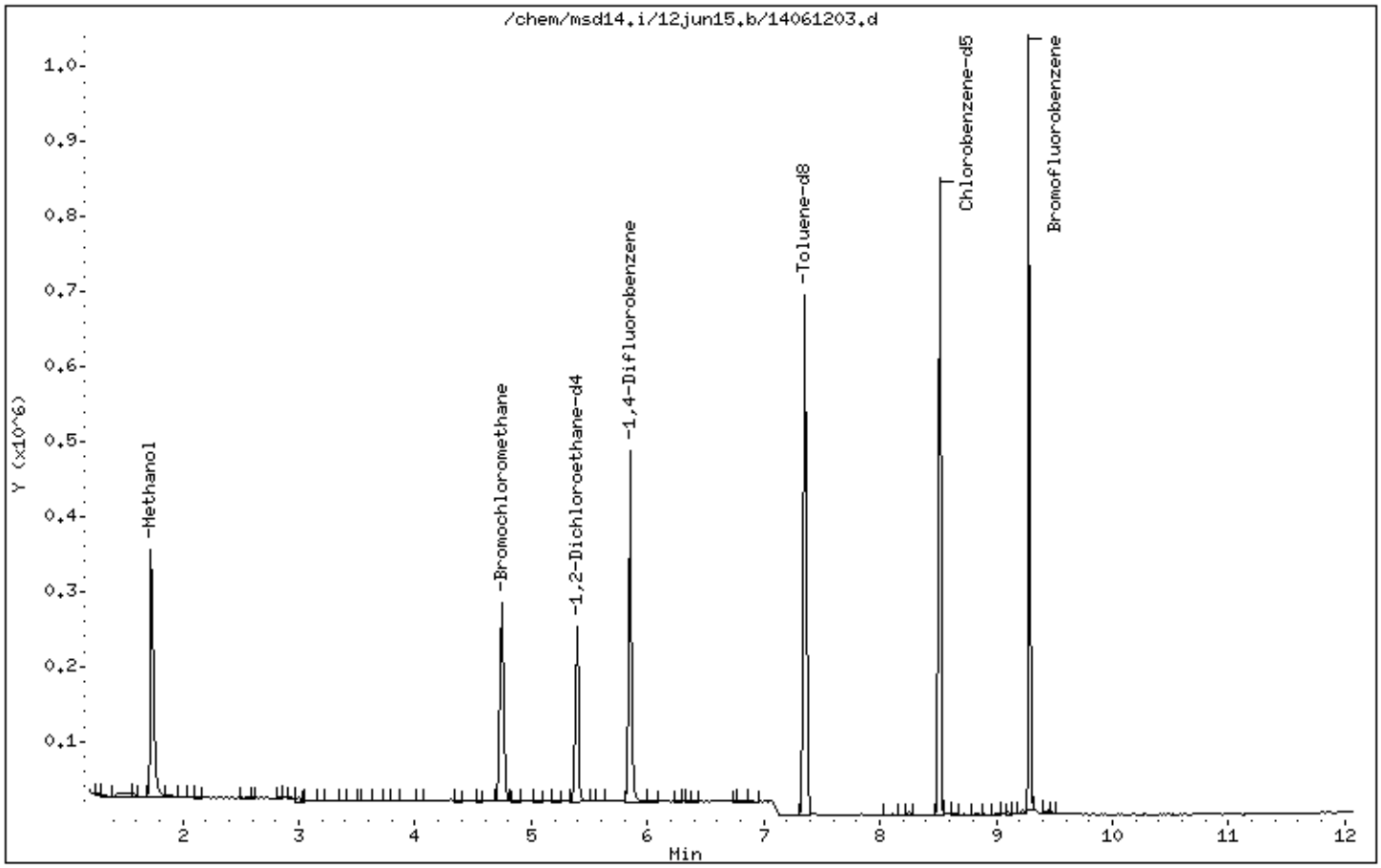
Instrument: msd14.i

Sample Info: 12.5ml #2736-15

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1506153B-06A

EPA METHOD TO-15 GC/MS

File Name:	**14061203c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/12/15 11:00 AM**	

Compound	**%Recovery**
Methanol	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd14.i Injection Date: 12-JUN-2015 11:00
Lab File ID: 14061203c.d Init. Cal. Date(s): 12-JUN-2015 12-JUN-2015
Analysis Type: AIR Init. Cal. Times: 11:00 11:00
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd14.i/12jun15.b/MEOH0612a.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	%D / %DRIFT	MAX	CURVE TYPE
$ 84 1,2-Dichloroethane-d4	1.44342	1.44341	0.010	0.00047	30.00000		Averaged
$ 107 Toluene-d8	1.01559	1.01560	0.010	-0.00001	30.00000		Averaged
$ 138 Bromofluorobenzene	0.53184	0.53184	0.010	0.00006	30.00000		Averaged
14 Methanol	33.59350	33.59332	0.010	0.00053	30.00000		Averaged

Eurofins Air Toxics Inc.

AMBIENT AIR METHOD TO14A/TO15

Data file : /chem/msd14.i/12jun15.b/14061203c.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 12-JUN-2015 11:00
Operator : cb Inst ID: msd14.i
Smp Info : 12.5ml #2736-15
Misc Info : 50ppbv (200ppbv)
Comment :
Method : /chem/msd14.i/12jun15.b/MEOH0612a.m
Meth Date : 15-Jun-2015 06:40 mchen Quant Type: ISTD
Cal Date : 12-JUN-2015 11:00 Cal File: 14061203.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MeOH.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 71 Bromochloromethane						CAS #: 74-97-5	
4.749	4.749 (1.000)	130	98234	400.000		80.00- 120.00	100.00
4.749	4.749 (1.000)	128	75966			45.12- 105.12	77.33
4.749	4.749 (1.000)	49	138452			101.60- 161.60	140.94
* 92 1,4-Difluorobenzene						CAS #: 540-36-3	
5.846	5.846 (1.000)	114	405774	400.000		80.00- 120.00	100.00
5.846	5.846 (1.000)	88	64843			0.00- 45.35	15.98
* 125 Chlorobenzene-d5						CAS #: 3114-55-4	
8.513	8.513 (1.000)	117	374046	400.000		80.00- 120.00	100.00
8.513	8.513 (1.000)	82	204377			23.98- 83.98	54.64
$ 84 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
5.390	5.390 (1.135)	65	141793	400.000	400.00	80.00- 120.00	100.00
5.390	5.390 (1.135)	67	72722			18.29- 78.29	51.29
$ 107 Toluene-d8						CAS #: 2037-26-5	
7.352	7.352 (1.258)	98	412102	400.000	400.00	80.00- 120.00	100.00
7.352	7.352 (1.258)	70	45968			0.00- 41.01	11.15

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 107 Toluene-d8 (continued)							
7.352	7.352 (1.258)	100	271934			34.42- 94.42	65.99
$ 138 Bromofluorobenzene						CAS #: 460-00-4	
9.283	9.283 (1.090)	174	198932	400.000	400.00	80.00- 120.00	100.00
9.283	9.283 (1.090)	95	280206			103.22- 163.22	140.86
9.283	9.283 (1.090)	176	189599			67.52- 127.52	95.31
14 Methanol						CAS #: 67-56-1	
1.728	1.728 (0.364)	31	412503	50.0000	50.000	80.00- 120.00	100.00
1.913	1.913 (0.403)	29	1857			0.00- 30.99	0.45
1.728	1.728 (0.364)	32	328121			61.63- 121.63	79.54

Report Date: 15-Jun-2015 06:40

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
Lab File ID: 14061203c.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msd14.i/12jun15.b/MEOH0612a.m
Misc Info: 50ppbv (200ppbv)

Calibration Date: 12-JUN-2015
Calibration Time: 11:00
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	98234	58940	137528	98234	0.00
92 1,4-Difluorobenze	405774	243464	568084	405774	0.00
125 Chlorobenzene-d5	374046	224428	523664	374046	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
71 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
92 1,4-Difluorobenze	5.85	5.52	6.18	5.85	0.00
125 Chlorobenzene-d5	8.51	8.18	8.84	8.51	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd14.i/12jun15.b/14061203c.d

Date : 12-JUN-2015 11:00

Client ID: CCV

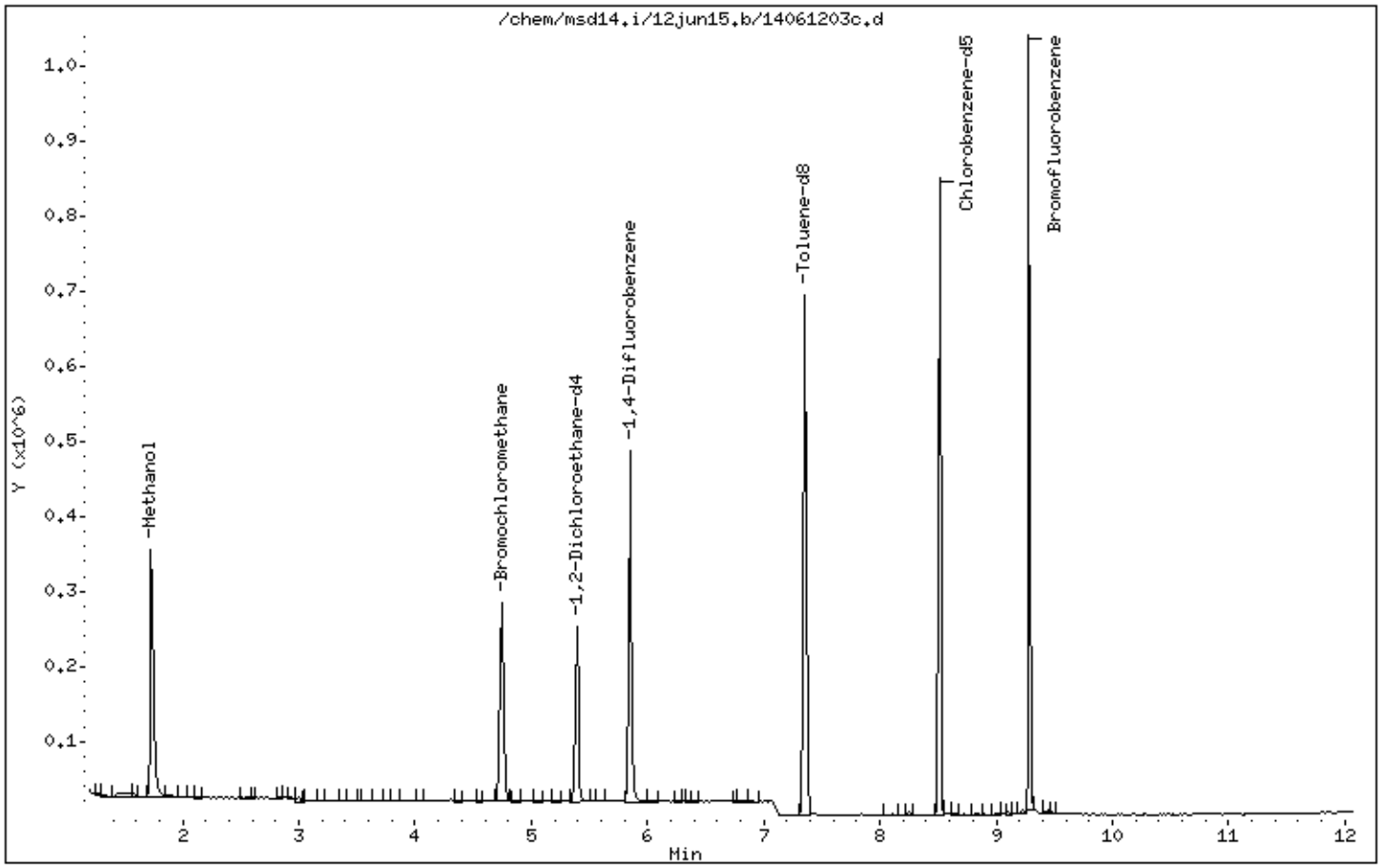
Instrument: msd14.i

Sample Info: 12.5ml #2736-15

Operator: cb

Column phase: RTx-624

Column diameter: 0.53



Eurofins Air Toxics, Inc. **MSD-14** **Logbook #2728**

BFB Verification of 176/174 m/z Ratio:	13896/14486 x 100 = 97.96%
Tekmar Purge Flow:	NA
Vacuum:	3.81×10^{-6}

IS/S Std. #: 2736-31	Exp. Date: 9/1/15
BCM	98234
1,4-DFB	405774
CB-d5	374046

Verified CCV IS vs ICAL mid-point (-40%D): CB

File ID:	14061203
Compound:	toluene-d8
Initials:	CB

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{Sample}}{\text{Area}_{IS}} \times \frac{\text{Conc}_{IS}}{\text{RRF}}$ = (412102) x (400) = 400.00
(405774) (1.01559)

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 Method (Circle one): TO-14A/TO-15/TO-17 Reported Result: 400.00

Method Name: MeOH 0612A

	Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	14061201	BFB Tune Check	2299-805	50ng	2mL	1.00	CB	6/12/15	0944	CB	
2	✓	02	System Blank	34343	Humid	50mL		CB		1036	CB	
3	✓	03	ICAL Level 2	2736-15	50ppbv	12.5mL		CB		1100	CB	exp 7/27/15 ; CCV
4	✓	04	Lab Blank	34343	Humid	50mL		CB		1125	CB	
5	✓	05	1506153B-01A	33902	5.1"Hg - 4.7psi	50mL	1.59	CB		1146	CB	
6	✓	06	-02A	6L0054	5.7"Hg - 5.1psi		1.66	CB		1211	CB	
7	✓	07	-03A	23925	3.7"Hg - 5psi		1.53	CB		1231	CB	
8	✓	08	-04A	22509	6.3"Hg - 4.9psi		1.69	CB		1252	CB	
9												
10												
11												
12												
13												
14												CB 6/12/15

Reviewed 6/12/15 Date

Eurofins Air Toxics Inc.

Data file : /var/chem/msd14.i/12jun15.b/14061201.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 12-JUN-2015 09:44
Operator : cb Inst ID: msd14.i
Smp Info : 2.0ml #2299-805;BFB;BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msd14.i/12jun15.b/bfb20.m
Meth Date : 12-Jun-2015 09:55 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
2.460	2.483	-0.023	95	21349			100.00- 100.00	100.00
2.460	2.483	-0.023	50	4712			8.00- 40.00	22.07
2.460	2.483	-0.023	75	11575			30.00- 66.00	54.22
2.460	2.483	-0.023	96	1393			5.00- 9.00	6.52
2.460	2.483	-0.023	173	53			0.00- 1.99	0.37
2.460	2.483	-0.023	174	14186			50.01- 120.00	66.45
2.460	2.483	-0.023	175	1079			4.00- 9.00	7.61
2.460	2.483	-0.023	176	13896			93.00- 101.00	97.96
2.460	2.483	-0.023	177	934			5.00- 9.00	6.72

Data File: /var/chem/msd14.i/12jun15.b/14061201.d

Date : 12-JUN-2015 09:44

Client ID: BFB

Instrument: msd14.i

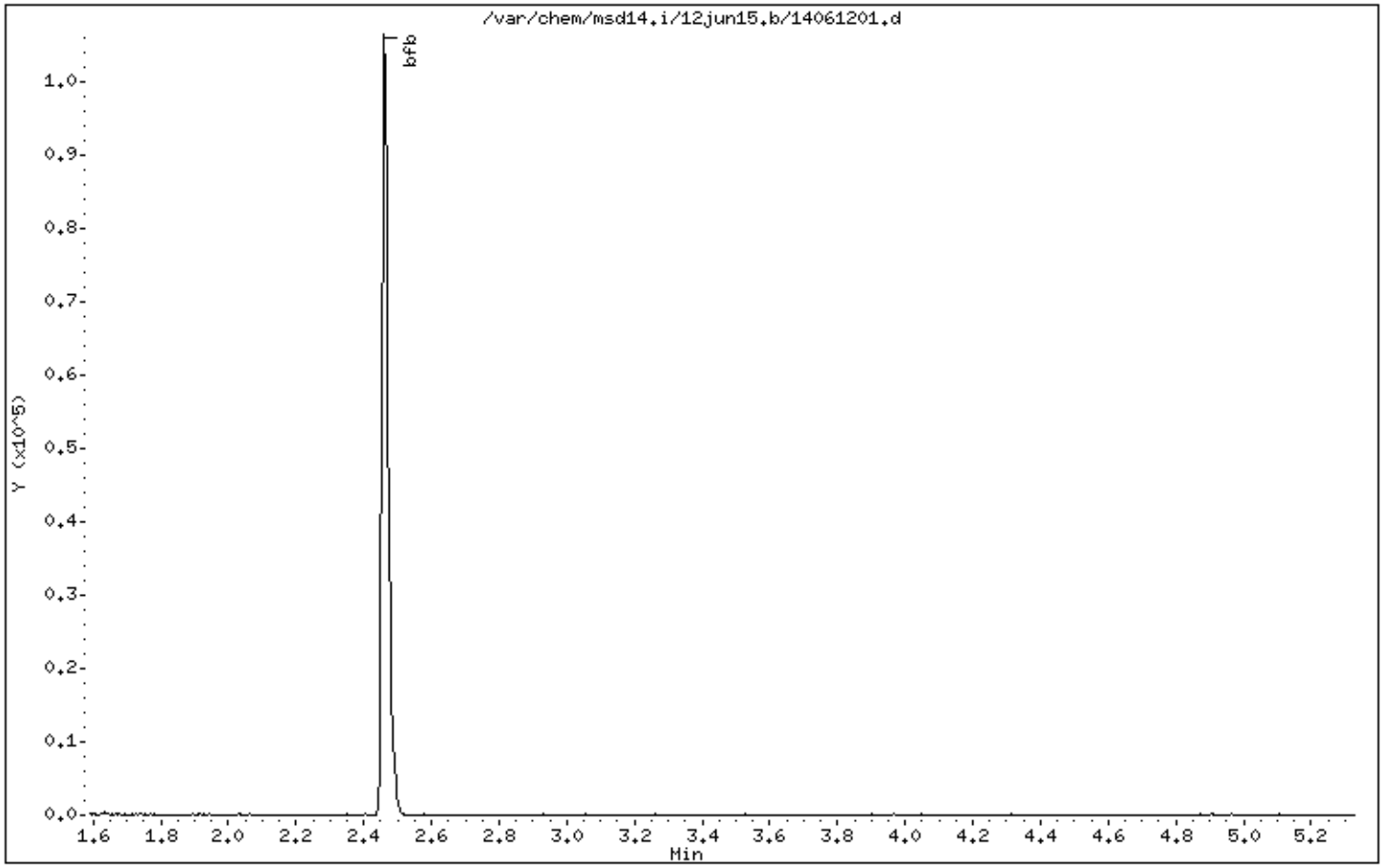
Sample Info: 2.0ml #2299-805;BFB;BFB

Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00



Data File: /var/chem/msd14.i/12jun15.b/14061201.d

Date : 12-JUN-2015 09:44

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-805;BFB;BFB

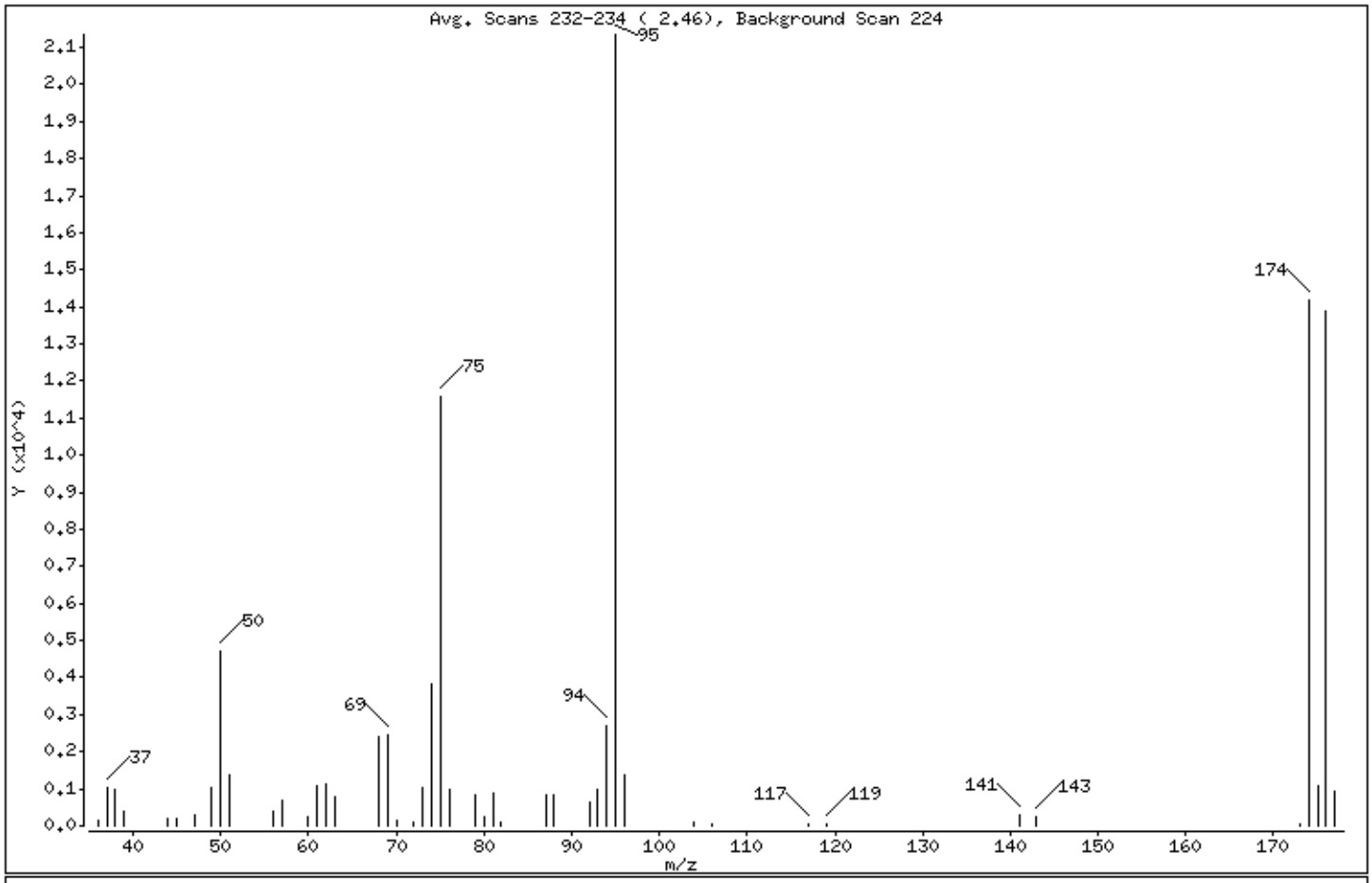
Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	22.07
75	30.00 - 66.00% of mass 95	54.22
96	5.00 - 9.00% of mass 95	6.52
173	Less than 1.99% of mass 174	0.25 (0.37)
174	50.01 - 120.00% of mass 95	66.45
175	4.00 - 9.00% of mass 174	5.05 (7.61)
176	93.00 - 101.00% of mass 174	65.09 (97.96)
177	5.00 - 9.00% of mass 176	4.37 (6.72)

Data File: /var/chem/msd14.i/12jun15.b/14061201.d

Date : 12-JUN-2015 09:44

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-805;BFB;BFB

Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00

Data File: 14061201.d
Spectrum: Avg. Scans 232-234 (2.46), Background Scan 224
Location of Maximum: 95.00
Number of points: 46

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	150	60.00	232	79.00	842	106.00	50
37.00	1018	61.00	1087	80.00	228	117.00	57
38.00	965	62.00	1137	81.00	865	119.00	59
39.00	393	63.00	792	82.00	114	141.00	282
44.00	177	68.00	2398	87.00	824	143.00	257
45.00	184	69.00	2444	88.00	813	173.00	53
47.00	305	70.00	169	92.00	639	174.00	14186
49.00	1015	72.00	109	93.00	997	175.00	1079
50.00	4712	73.00	1029	94.00	2718	176.00	13896
51.00	1393	74.00	3831	95.00	21344	177.00	934
56.00	378	75.00	11575	96.00	1393		
57.00	710	76.00	996	104.00	74		

Shipping/ Receiving Documents

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Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Brian Whittaker at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Terry Taylor
Collected by: (Print and Sign) David Lindstrand
Company: AMAI Email:
Address: 2700 Westchester City: Purchase State: NY Zip: 10577
Phone: 914-251-0400 x309 Fax:

Project Info:
P.O. #:
Project #: BMS Humacao
Project Name: Building 6 Indoor Air

Turn Around Time:
☐ Normal
☒ Rush 3-Day (specify)

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	BG-1IA-2	33902	6/7/15	18:04	TO15	-30"	-5.5"		
02A	BG-2IA-2	6L0054	6/7/15	17:41		-30"	-7.0		
03A	BG-2IAD-2	23925	6/7/15	17:40		-30"	-5.0		
04A	BG-AA-3	22509	6/7/15	17:49		-30"	-8.0		
	Empty Canister	6L1269	—	—	Not Used/No Analysis	—	—		

6/8/15

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	6/8/15 13:00		6/9/15 0925
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
Report full list of TO-15 compounds

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex	7737 7733 2454		Good	Yes No None	1506153

Form 1293 rev.11

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SAMPLE RECEIPT SUMMARY

WORKORDER 1506153B

Client

Mr. Terry Taylor
Anderson Mulholland &
Associates, Inc.
2700 Westchester Avenue
Suite 417
Purchase, NY 10577
Sales Rep: N/A

Phone

(914) 251-0400

Fax

Date Promised: 06/15/15 2:00 pm
Date Completed: 6/15/15
Date Received: 6/9/15
PO#:
Project#: BMS Humacao Building 6 Indoor Air

Total $: $ 450.00
Logged By: CC

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	B6-1IA-2	Modified TO-15 (5&20 ppbv)	6/7/2015	5.1 "Hg	$112.50
02A	B6-2IA-2	Modified TO-15 (5&20 ppbv)	6/7/2015	5.7 "Hg	$112.50
03A	B6-2IAD-2	Modified TO-15 (5&20 ppbv)	6/7/2015	3.7 "Hg	$112.50
04A	B6-AA-3	Modified TO-15 (5&20 ppbv)	6/7/2015	6.3 "Hg	$112.50
05A	Lab Blank	Modified TO-15 (5&20 ppbv)	NA	NA	$0.00
06A	CCV	Modified TO-15 (5&20 ppbv)	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: BMS/19256

BILL TO: Accounts Payable
Anderson Mulholland & Associates, Inc.
2700 Westchester Avenue
Suite 417
Purchase, NY 10577

Analysis Code: TO-15 (5&20)

REMARKS: A 50% surcharge is applied for a 72 hour turnaround time.

TERMS: NET 30

Reporting Method: TO-15 (5&20 ppbv) (Sp)-Methanol Only

Other Records

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{14.7\text{psi} + \text{Final Pressure (psi)}}{14.7\text{psi} - [\text{Init. Pressure ("Hg)})*(14.7\text{psi}/30\text{"Hg})]}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{psi} + \text{Final Pressure (psi)}}{14.7\text{psi} + \text{Initial Pressure (psi)}}$$

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
0.0	1.34	2.02
0.2	1.35	2.03
0.4	1.36	2.05
0.5	1.36	2.05
0.6	1.37	2.06
0.8	1.38	2.08
1.0	1.39	2.09
1.2	1.40	2.10
1.4	1.40	2.12
1.5	1.41	2.13
1.6	1.42	2.13
1.8	1.42	2.15
2.0	1.44	2.16
2.2	1.45	2.18
2.4	1.46	2.20
2.5	1.46	2.20
2.6	1.47	2.21
2.8	1.48	2.23
3.0	1.49	2.24
3.2	1.50	2.26
3.4	1.51	2.28
3.5	1.52	2.29
3.6	1.52	2.30
3.8	1.53	2.31
4.0	1.55	2.33
4.2	1.56	2.35
4.4	1.57	2.37
4.5	1.58	2.38
4.6	1.58	2.39
4.8	1.60	2.40
5.0	1.61	2.42
5.2	1.62	2.44
5.4	1.63	2.46
5.5	1.64	2.47
5.6	1.65	2.48
5.8	1.66	2.50
6.0	1.68	2.52
6.2	1.69	2.55
6.4	1.70	2.57
6.5	1.71	2.58
6.6	1.72	2.59
6.8	1.73	2.61
7.0	1.75	2.64
7.2	1.76	2.66
7.4	1.78	2.68
7.5	1.79	2.69
7.6	1.79	2.70

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
7.7	1.80	2.72
7.8	1.81	2.73
8.0	1.83	2.76
8.2	1.84	2.78
8.4	1.86	2.81
8.5	1.87	2.82
8.6	1.88	2.83
8.8	1.90	2.86
9.0	1.91	2.89
9.2	1.93	2.91
9.4	1.95	2.94
9.5	1.96	2.96
9.6	1.97	2.97
9.8	1.99	3.00
10.0	2.01	3.03
10.2	2.03	3.06
10.4	2.05	3.09
10.5	2.06	3.11
10.6	2.07	3.12
10.8	2.09	3.16
11.0	2.12	3.19
11.2	2.14	3.22
11.4	2.16	3.26
11.5	2.17	3.28
11.6	2.18	3.29
11.8	2.21	3.33
12.0	2.23	3.37
12.2	2.26	3.40
12.4	2.28	3.44
12.5	2.30	3.46
12.6	2.31	3.48
12.8	2.34	3.52
13.0	2.36	3.56
13.2	2.39	3.61
13.4	2.42	3.65
13.5	2.44	3.67
13.6	2.45	3.70
13.8	2.48	3.74
14.0	2.51	3.79
14.2	2.54	3.84
14.4	2.58	3.88
14.5	2.59	3.91
14.6	2.61	3.94
14.8	2.64	3.99
15.0	2.68	4.04
15.2	2.72	4.10
15.4	2.75	4.15

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
15.5	2.77	4.18
15.6	2.79	4.21
15.8	2.83	4.27
16.0	2.87	4.33
16.2	2.91	4.39
16.4	2.96	4.46
16.5	2.98	4.49
16.6	3.00	4.52
16.8	3.05	4.59
17.0	3.09	4.66
17.2	3.14	4.74
17.4	3.19	4.81
17.5	3.22	4.85
17.6	3.24	4.89
17.8	3.30	4.97
18.0	3.35	5.05
18.2	3.41	5.14
18.4	3.47	5.22
18.5	3.50	5.27
18.6	3.53	5.32
18.8	3.59	5.41
19.0	3.65	5.51
19.2	3.72	5.61
19.4	3.79	5.72
19.5	3.83	5.77
19.6	3.87	5.83
19.8	3.94	5.94
20.0	4.02	6.06
20.2	4.10	6.18
20.4	4.19	6.31
20.5	4.23	6.38
20.6	4.28	6.45
20.8	4.37	6.59
21.0	4.47	6.73
21.2	4.57	6.89
21.4	4.67	7.05
21.5	4.73	7.13
21.6	4.79	7.22
21.8	4.90	7.39
22.0	5.03	7.58
22.4	5.29	7.98

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
22.5	5.36	8.08
22.6	5.43	8.19
22.8	5.58	8.42
23.0	5.74	8.66
23.2	5.91	8.91
23.4	6.09	9.18
23.5	6.19	9.32
23.6	6.28	9.47
23.8	6.48	9.78
24.0	6.70	10.10
24.2	6.93	10.45
24.4	7.18	10.82
24.5	7.31	11.02
24.6	7.45	11.22
24.8	7.73	11.66
25.0	8.04	12.12
25.2	8.38	12.63
25.4	8.74	13.18
25.5	8.93	13.47
25.6	9.14	13.78
25.8	9.57	14.43
26.0	10.05	15.15
26.2	10.58	15.95
26.4	11.17	16.84
26.5	11.49	17.32
26.6	11.82	17.83
26.8	12.56	18.94
27.0	13.40	20.20
27.2	14.36	21.65
27.4	15.46	23.31
27.5	16.08	24.24
27.6	16.75	25.26
27.8	18.27	27.55
28.0	20.10	30.31
28.2	22.34	33.67
28.4	25.13	37.88
28.5	26.80	40.41
28.6	28.72	43.29
28.8	33.50	50.51
29.0	40.20	60.61

Compound List

TO-15 (5&20 ppbv) (Sp)-Methanol Only

CAS Number	Compound	Detection Limit ppbv	Type
67-56-1	Methanol	50	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 03/26/15
Workorder # 1S06153B	Form F1.27	Revision #11	Revision date: 03/26/15	Page 1 of 2

S1	S2	S3	S4	D	Section 1 – Spec Out				
					Initials/Instrument/Date	S1: CB/14/6-12-15	S2:	S3:	S4:
✓					Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓					Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
NA					Manual Integrations included and approved				
✓					Chain of Custody verified for special comments (add comments below)				
NA					Non-standard Target sublist printed				

Profile, analyses, reporting, special notes and unusual circumstances:

Ø out

A1	A2	A3	A4	D	Section 2 – Sample Analysis				
					Initials/Date	A1: CB/6-12-15	A2:	A3:	A4:
✓				✓	Internal Standard/Surrogate Recoveries, Dilution Factors, Load Volumes, Initial/Final Pressures, and Canister #s Verified				
NA				NA	a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg of instrument				
NA				NA	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓					12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) have been evaluated for comparability and/or samples have been checked for trends (Inf/Eff).				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds etc)				

Analytical and special notes:

01A - 04A - full loads

D1	D2	D3	D4	T	3T	Section 3 – Target Data Reduction	Technical Review Needed? Circle one: Yes/No		T:	
						Initials/Instrument/Date	D1: MC 6/15/15	D2:	D3:	D4:
NA						CAR # (if applicable)				
✓						Spectra Verified (documentation of spectral defense included if applicable)				
NA						TICs resemble reference spectra/ TICs between sample dups. are consistent (if applicable)				
✓						Lab Narrative is correct				
NA						TPH/NMOC calculations complete and included in folder				

Special notes: Meet style print curve

A	3T	Section 4- Atlas Data Entry	Lumen verified and included in folder	Circle one: Yes/No
		Initials/Date: MC 6/15/15	3rd Tier: (needed only for DOD or per client request)	
NA		Sample Discrepancy Report (SDR) complete and approved (if applicable)		
NA		Manually entered results are checked		
✓		At least one result per sample is verified against Target quant sheets		
✓		Appropriate data qualifier flags are applied		
✓		Final invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Eurofins Air Toxics, Inc.	Reissued - Data Review Checklist			Release Date 01/29/14
	Form F 1.27	Revision #8	Revision date 01/29/14	Page 2 of 2

Workorder # :				Reason for Reissue:
W	T	3T	Q	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	Tech Review (Initials/Date)	*3rd Tier Review *3rd Tier Report Review is for DoD & Client Specific projects only (Initials/Date)	QA Review (Initials/Date)

Workorder # :				Reason for Reissue:
W	T	3T	Q	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	Tech Review (Initials/Date)	*3rd Tier Review *3rd Tier Report Review is for DoD & Client Specific projects only (Initials/Date)	QA Review (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable